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LLG-PCR Tubes and Plates, PP

- Premium quality
- Produced in a cleanroom environment
- RNase-, DNase-, Human DNA- and Pyrogen-free
- Virgin Polypropylene
- Compatible with all major thermal cyclers

1

1 LLG-PCR tubes with attached lids, PP

- Individual tubes
- Compatible with all major thermal cyclers
- 0.2ml or 0.5ml
- Maximum tube capacity: 0.25ml or 0.6ml when closed
- Individual attached flat or domed snap caps
- Consistent wall thickness for uniform heat transfer
- Cap design ensures fit and helps reduce sample evaporation
- Virgin polypropylene, certified RNase, DNase and endotoxin free

Description	PK	Cat. No.
0.2ml, single, flat cap	1000	**9.407 501**
0.2ml, single, domed cap	1000	**9.407 502**
0.5ml, single, flat cap	1000	**9.407 504**
0.5ml, single, domed cap	1000	**9.407 505**

LLG-PCR-Tubes, 8 Strips with attached individual caps, PP

- for 0.2 ml Thermal cycler blocks
- with flat or domed cap
- made of high quality polypropylene, RNase-, DNase- and Endotoxin free

Description	PK	Cat. No.
8 PCR tube strips with individually attached flat snap caps	250	**9.407 515** 2
8 PCR tube strips with individually attached domed ultra clear snap caps	250	**9.407 516**

2

9.407 515

3

9.407 503

LLG-PCR-Tubes, 8 Strips, PP

NEW!

- For 0.2ml thermal cycler blocks
- Detached cap strips can be used as individual tubes when cut
- With domed or flat caps
- Consistent wall thickness for uniform heat transfer
- Contamination-free opening
- Cap strips provide tight seal during all PCR cycles
- Easy-to-use
- Maximum tube capacity: 0.25ml when closed
- Highly transparent cap makes them ideal for qPCR
- Virgin polypropylene, certified RNase, DNase and endotoxin free

Description	PK	Cat. No.
8 PCR tube strips plus detached cap strips, domed caps	250	**9.407 503** 3
8 PCR tube strips plus detached cap strips, flat caps	250	**9.407 514**
8 PCR detached cap strips, flat caps	120	**6.254 729**
8 PCR detached cap strips, domed caps	120	**9.407 522**
8 PCR detached cap strips, domed caps	250	**7.656 858**

E & OE.

1 PCR Products, BRAND

BRAND has significantly expanded its product range of extra-thin-wall disposable products, which were specially developed to satisfy the demands of PCR applications. *BRAND*

Quality features
- Suitable for use in common thermal cyclers
- PP, extra-thin uniform wall thicknesses to provide the optimal thermal transfer and short cycle times
- 96-well PCR plates with blue alphanumeric code and cut corner marking
- Highly clear flat covers optimally suited for qPCR
- DNase-, DNA- and RNase-free
- Autoclavable at 121°C (2 bar), acc. DIN EN 285
- qPCR: Products which are suitable for Real Time PCR (qPCR)

White PCR products offer significantly better results for qPCR, and are specifically recommended by many thermal cycler manufacturers.

2 Single PCR tubes with attached caps, PP

0.2 ml and 0.5 ml PCR tubes with attached caps are compatible with leading thermal cyclers with heated lids. The caps are easy to open and close without tools, yet ensure a tight fit to reduce sample evaporation. The various colors of the PCR tubes allow fast sample classification. *BRAND*

Capacity ml	Description	Colour	PK	Cat. No.
0.2	domed cap	clear	1000	**9.409 370**
0.2	flat cap	clear	1000	**9.409 371**
0.2	flat cap	pink	1000	**9.409 280**
0.2	flat cap	yellow	1000	**9.409 281**
0.2	flat cap	green	1000	**9.409 282**
0.2	flat cap	blue	1000	**9.409 283**
0.5	flat cap	clear	1000	**9.409 372**
0.5	flat cap	pink	1000	**9.409 284**
0.5	flat cap	yellow	1000	**9.409 285**
0.5	flat cap	green	1000	**9.409 286**
0.5	flat cap	blue	1000	**9.409 287**

3 Strips of 8-/12- PCR tubes plus detached cap strips, PP autoclavable

PP. Strips of 8 or 12 connected PCR tubes (0.2ml). Cap strips consisting of 8 or 12 domed caps (available separately) provide tight seal during all PCR cycles, thus protecting samples from cross-contamination. The tubes have a holding strap at one end, and the cover strips on each lid have a small lip on the side for careful, contamination-free opening. Consistent tube wall thickness allows rapid heat transfer along the entire exterior tube surface. Made of pure, virgin polypropylene, free from RNase-, DNase- and DNA. Autoclavable at 121°C (2 bar), according to DIN EN 285. *BRAND*

Capacity ml	Description	Colour	PK	Cat. No.
0.2	Strips of 8 PCR tubes, without caps	clear	125	**9.409 374**
0.2	Strips of 8 PCR tubes, without caps	pink	125	**9.409 620**
0.2	Strips of 8 PCR tubes, without caps	yellow	125	**9.409 621**
0.2	Strips of 8 PCR tubes, without caps	green	125	**9.409 622**
0.2	Strips of 8 PCR tubes, without caps	blue	125	**9.409 623**
0.2	Strips of 8 PCR tubes, without caps	white	125	**7.654 202**
0.2	Strips of 8 PCR caps, domed	clear	125	**9.409 375**
0.2	Strips of 8 PCR caps, domed	pink	125	**9.409 624**
0.2	Strips of 8 PCR caps, domed	yellow	125	**9.409 625**
0.2	Strips of 8 PCR caps, domed	green	125	**9.409 626**
0.2	Strips of 8 PCR caps, domed	blue	125	**9.409 627**
0.2	Strips of 8 PCR caps, flat	clear	125	**6.230 345**
0.2	Strips of 8 PCR tubes, with separate flat caps	clear	250	**4.007 894**
0.2	Strips of 8 PCR tubes, with separate domed caps	clear	250	**4.007 895**
0.2	Strips of 12 PCR tubes, without caps	clear	125	**9.409 628**
0.2	Strips of 12 PCR tubes, without caps	pink	125	**9.409 629**
0.2	Strips of 12 PCR tubes, without caps	yellow	125	**9.409 630**
0.2	Strips of 12 PCR tubes, without caps	green	125	**9.409 631**
0.2	Strips of 12 PCR tubes, without caps	blue	125	**9.409 632**
0.2	Strips of 12 PCR caps, domed	clear	125	**9.409 633**
0.2	Strips of 12 PCR caps, domed	pink	125	**9.409 634**
0.2	Strips of 12 PCR caps, domed	yellow	125	**9.409 635**
0.2	Strips of 12 PCR caps, domed	green	125	**9.409 636**
0.2	Strips of 12 PCR caps, domed	blue	125	**9.409 637**

1

9.409 377

PCR tubes strips , PP, with attached individual caps

NEW!

The strips of 8 PCR tubes with attached, flat individual caps provide an ideal protection against contamination. The highly transparent cap makes them ideal for a quantitative Real Time PCR. Available in Standard (0.2ml) or Low Profile (0.15ml).

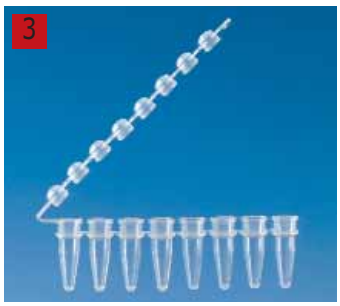
BRAND

2

6.228 560

Capacity ml	Type	Colour	PK	Cat. No.
0.20	Standard	transparent	120	**6.228 560** 2
0.20	Standard	white	120	**9.409 245**
0.15	Low Profile	transparent	120	**9.409 377** 1
0.15	Low Profile	white	120	**9.409 246**

3



3 Strips of 8 PCR tubes with attached cap strips

Eight 0.2 ml PCR tubes joined together in a strip with attached, hinged 8-cap strips. PP. The hinged, domed cap makes opening and closing the tubes with one hand easier.

BRAND

Type	PK	Cat. No.
Colourless	125	**9.409 373**

4 5 LLG-96-well PCR Plates, PP

- cut-away corner for orientation
- clear well bottom for sample visibility, with V-Bottom
- compatible with leading thermal cyclers
- consistent wall thickness for uniform heat transfer
- holes in the skirt for easy handling
- virgin polypropylene, certified RNase, DNase and endotoxin free

Description	Capacity µl	PK	Cat. No.
96 Well Plate, skirted, low profile, PP	200	25	**9.407 507** 4
96 Well Plate, non-skirted, PP	300	25	**6.238 061** 5

6 LLG-384-well PCR plates, PP

- maximum well volume: 40µl
- working well volume: 25µl
- cut-away corners for plate orientation
- fully skirted for use with automated systems
- holes in the skirt for easy handling
- compatible with all leading 384 block thermal cyclers
- high temperature tolerance (-196°C to + 120°C)
- virgin polypropylene, certified RNase, DNase and endotoxin free

Description	Capacity µl	PK	Cat. No.
384 Well Skirted PCR Plate, thin wall, PP	40	50	**9.407 500**

4

9.407 507

5

6.238 061

6

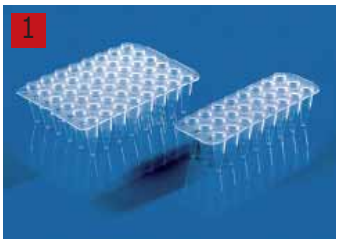
E & OE.

PCR-plates for precise analyses

Ultra-thin wall design facilitates rapid and steady heat transfer. Smooth interior tube surface minimises binding of enzymes and nucleic acids. Raised rims of wells protect against cross-contamination and provide tight seal particularly in combination with BRAND´s new sealing mats. *BRAND*

1 24/48 well PCR Plates, non-skirted, PP, for qPCR

0.2ml wells. The 24 /48 well plates reduce material costs and allow work on a compact PCR plate even with small sample throughputs. *BRAND*



Description	Colour	PK	Cat. No.
24-well, standard profile, elevated rim	clear	40	**6.229 655**
24-well, standard profile, elevated rim	white	40	**4.007 901**
48-well, standard profile, elevated rim	clear	20	**9.409 368**
48-well, standard profile, elevated rim	white	20	**4.007 902**

White PCR products for Real Time PCR

The use of real-time PCR (qPCR) is becoming increasingly widespread. The new line of white PCR products by BRAND offers significantly better results in this application than transparent tubes or plates. The different products in this line are uniformly colored with TiO2 (titanium dioxide), so that in combination with the smooth surfaces, the optimum reflection of the fluorescence signal is provided. *BRAND*

96 well PCR-Plates, PP, for PCR or qPCR

NEW!

The ultra thin-walled PCR plate design facilitates constant, rapid and precise heat transfer. The smooth vessel interior minimizes the binding of enzymes and nucleic acid to the walls. The rim of the wells are designed to protect against cross-contamination, allowing a reliable seal with the sealing mats tailored to the plates. *BRAND*

9.409 247

9.409 381

96-well, non-skirted
PP. 0.2 ml wells. 96-well non-skirted PCR plates are suitable for most commercially available thermal cyclers.

9.409 264

9.409 383

96-well, semi-skirted
PP. 0.2 ml wells. 96-well semi-skirted PCR plates can easily be labelled or tagged with a barcode.

96-well, semi-skirted. Suitable for Roche® LightCycler® 480 and other thermal cyclers
PP. 0.15 ml wells. Semi-skirted. With black alphanumeric code. Available with or without self-adhesive sealing film (polyester, high-transparent, for qPCR).

4.007 899

9.409 351

96-well, skirted
PP. 0.2 ml wells. 96-well skirted PCR plates are especially rigid, and are optimally suited for use with automatic pipetting systems and for being transported.

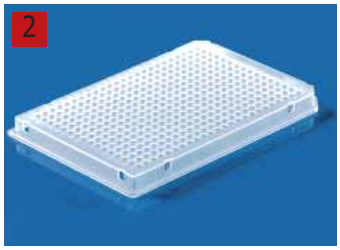
Description	Volume ml	Colour	Cut corner	PK	Cat. No.
Low Profile, non-skirted	0.15	clear	H12	50	**9.409 247** 2
Low Profile, semi skirted	0.15	clear	A12	50	**9.409 256**
Low Profile, semi skirted, raised skirt	0.15	clear	A1	50	**9.409 258**
Low Profile, fully skirted*	0.15	clear	H1	50	**9.409 351** 7
Low Profile, non-skirted	0.15	white	H12	50	**9.409 248**
Low Profile, semi skirted	0.15	white	A12	50	**9.409 257**
Low Profile, semi skirted, raised skirt	0.15	white	A1	50	**9.409 259**
Low Profile, for LightCycler® 480 (Roche®), semi skirted*	0.15	white	H12	50	**4.007 899** 6
Low Profile, for LightCycler® 480 (Roche®), semi skirted, incl. films*	0.15	white	H12	50	**4.007 900**
Low Profile, fully skirted*	0.15	white	H1	50	**9.409 266**
Standard profile, non-skirted	0.20	clear	A12	50	**9.409 254**
Standard profile, semi skirted	0.20	clear	A12	50	**9.409 264** 4
Standard profile, non-skirted, elevated rim	0.20	clear	H12	50	**9.409 381** 3
Standard profile, semi skirted, elevated rim	0.20	clear	H12	50	**9.409 383** 5
Standard profile, non-skirted	0.20	white	A12	50	**9.409 255**
Standard profile, semi skirted	0.20	white	A12	50	**9.409 265**
Standard profile, non-skirted, elevated rim	0.20	white	H12	50	**4.007 896**
Standard profile, semi skirted, elevated rim	0.20	white	H12	50	**4.007 897**

*Black alphanumeric code, no additional markings on the cut corner.

1 PCR Plates384-well

The 40µl wells can hold sample volumes of 2µl to 30µl. This helps to reduce reagents costs and shortens cycle times. The plates can be filled using conventional multichannel pipettes or automated systems. Suitable for qPCR (quantitative Real Time PCR). *BRAND*

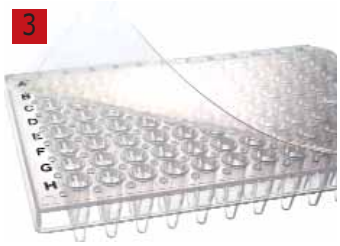
Description	PK	Cat. No.
384-well PCR plate, fully skirted, PP	50	**9.409 391**
384-well PCR plate, fully skirted, PP	50	**9.409 306**
384-well PCR plate, fully skirted, rigid plate	50	**9.409 307**



2 384 well PCR-Plates, white, for real-time PCR

White, PP. Suitable for qPCR. 0.03ml tubes. *BRAND*

Description	PK	Cat. No.
fully skirted, for LightCycler® 480 (Roche®)	50	**4.007 898**



6.238 132

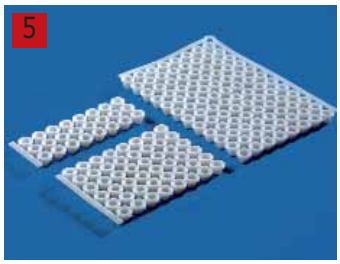
9.407 506

LLG-PCR adhesive film and foil

For use in cyclers with screw-down or clip-down lids. With end tabs

PCR Film: Clear film allows both the visual inspection of samples and fluorescence measurements.
PCR Foil: Easy to pierce, no residue of adhesive on the pipette tips.
QPCR Foil: Adhesive seal optically clear, peelable, for QPCR and fluorescence applications.

Description	Temp. range °C	PK	Cat. No.
PCR film	-20 to +120	100	**6.238 132** 3
PCR foil	-80 to +150	100	**9.407 506** 4
QPCR foil	-40 to +120	50	**6.240 725**



5 PCR Sealing Mats

PCR sealing mats have been designed to fit BRAND PCR plates exactly and reduce evaporation losses by up to 75% compared to conventional systems. They are characterised by their high flexibility, tight sealing, autoclavability and are easily pierced by pipette tips. *BRAND*

Description	Material	PK	Cat. No.
Sealing mat for 24-well PCR plates	TPE	10	**9.409 369**
Sealing mat for 48-well PCR plates	TPE	10	**6.230 903**
Sealing mat for 96-well PCR plates	TPE	5	**9.409 384**
Sealing mat for 384-well PCR plates	Silicone	10	**9.409 311**

6 Sealing Films, Self-adhesive

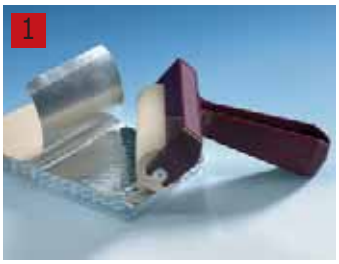
NEW!

In case the microplates, PCR- and Deepwellplates need not only to be covered, but also securely sealed, self-adhesive sealing films are available. These film sheets can be easily applied on the plates and removed also without the use of expensive equipment. They are available in different versions and are especially well-suited for storage or cell- and tissue-culture. *BRAND*

Application	Description	Material	PK	Cat. No.
ELISA, PCR	single film	polypropylene	100	**9.409 386**
ELISA; Real Time PCR	single film, highly transparent	polyester	100	**4.000 237**
Cold storage	roll with 100 sheets	aluminium	100	**9.409 387**
Cold storage	single film	aluminium	100	**6.223 125**
Storage	single film, DMSO-resistant	polypropylene	100	**9.408 983**
Sealing foil, gas-permeable, non-sterile	single film, gas-permeable	rayon	100	**9.407 620**
Cell- and tissue culture	single film, gas-permeable, sterile	rayon	50	**6.224 223**
Automation	single film	PE/PP	50	**4.000 389**
Storage, fluorescence measurement	single film	vinyl	50	**4.000 390**
Luminescence measurement	single film	vinyl	50	**4.000 391**

E & OE.

1 Roller for sealing films



The self-adhesive films can be securely and easily applied with a roller. The hard rubber roller ensures that the film is attached to the plate with a uniform pressure. The rugged handle with comfort-grip lessens fatigue.

BRAND

Type	PK	Cat. No.
Roller for sealing films	1	**4.000 392**

2 AccuSeal Semi-Automated Plate Sealer

- Accepts a wide range of microplates and heat seals
- User-friendly control system
- Large digital display shows all operating parameters
- Adjustable sealing temperature: 100°C to 190°C, or no heat
- Precise temperature, timing and pressure for consistent sealing

Labnet

Specifications

Dimensions (WxDxH):	171mm x 324mm x 362mm
Weight:	12kg
Sealing Temperature:	Off, 100 to 190°C (increments of 1.0°C)
Temperature Accuracy:	±1.0°C
Temperature Uniformity:	±1.0°C
Sealing Time:	0.5 to 10 sec (incements of 0.1 sec)
Compatible Plate Materials:	PP (Polypropylene), PS (Polystyrene), PE (Polyethylene)
Compatible Plate Types:	Standard Assay Plates, Deep-Well Storage plates, PCR Plates (Non-Skirted, Semi-Skirted, Full-Skirted)
Maximum Plate Height:	45mm
Compatible Sealing Film Types:	Foil Polypropylene laminate, Clear Polyester-polypropylene laminate, Clear polymer, Thin clear polymer, Foil-laminate, Foil

Type	Description	PK	Cat. No.
AccuSeal	includes adapters for standard and deepwell microplates, 230V	1	**9.595 290**
AccuSeal	adapter for sealing PCR plates	1	**9.595 291**

3 96-Well PCR Rack, HDPP

- Manufactured from high density polypropylene which is fully autoclavable. Excellent rack for "before" and "after" PCR sampling.
- This rack can be used alone or inserted in the workstation.
- This working/storage rack is designed to accommodate 96 pieces 0.2ml PCR tubes or strips of 8 and 12 tubes.
- Tube wells are easly identified with alphanumeric,embossed numbers and letters.
- Translucent clear cover protects the tubes from dust and has a non-slip surface to allow safe storage of multiple racks.
- Dimensions (WxDxH): 125 x 88 x 31mm

Isolab

For tubes ml	PK	Cat. No.
0.2	1	**6.255 804**

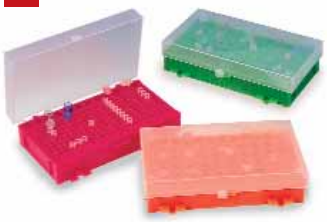
4 96-Well PCR Rack, PP

Removable hinged lid lies flat. Perfect for pre- or post-PCR sampling. Sturdy polypropylene rack accommodates individual 0.2ml tubes or strips of 8 or 12 tubes. Tube wells are easily identified with embossed numbers and letters. Dimensions (L x W x H): 130 x 98 x 33mm. Autoclavable.

Heathrow Scientific

For tubes ml	Colour	PK	Cat. No.
0.2	blue, green, pink, yellow, orange	5	**9.409 661**

1



1 40/168-well PCR Rack, PP

Heathrow Scientific

Removable hinged lid fits both sides. Flip this polypropylene reversible rack to the size of tubes you need. PCR side of the rack has 168 wells that hold 0.2ml tubes. The wells accommodate 8- or 12-tube strips or individual tubes. The opposite side of the rack has 40 wells that hold 0.5ml tubes. Both sides of the rack have 12 wells for 1.5ml tubes. Dimensions (L x W x H): 206 x 131 x 54mm. Autoclavable.

For tubes ml	Colour	PK	Cat. No.
0.2	blue, green, purple, yellow, orange	5	**9.409 660**

2

2 PCR box and PCR rack

BRAND

The rack can be fitted into the box. Together, they create an ideal workstation for 0.2 ml PCR tubes, available in individual, 8-tube strip and 12 tube strip or 96-well plate formats.
The box with transparent lid can be stacked to save space and is temperature resistant from -80 to +121°C. Assorted colours (red, yellow, purple, green, blue).

Description	PK	Cat. No.
PCR-Box /-Rack	5	**9.409 379**

3

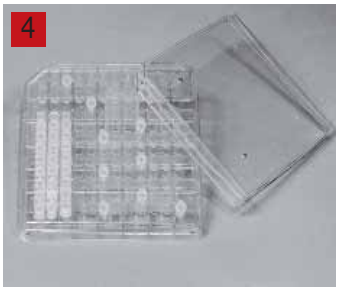
3 PCR Mini cooler, PP

BRAND

With transparent lid.
For protecting samples prior to warming. The mini PCR cooler keeps samples at 4°C for approx. 3 hours. The insulating gel changes from violet to pink at 7°C. Suitable for 0.2 ml single vessels, 8-strips, 12-strips as well as 96-well PCR plates.

Description	PK	Cat. No.
PCR Mini cooler	2	**6.228 848**

4



4 PCR-Tube Cryobox

NEW!

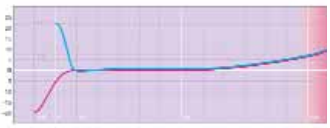
Bel-Art Products

Designed to fit in a standard 53mm freezer rack, this 144-place PCR Tube Freezer Box will hold individual and/or strip 0.2ml PCR tubes.
- Designed for ULT freezer storage at temperatures down to -86°C
- Durable and impervious to moisture
- Clear polycarbonate lid and base and alpha-numeric index make it easy to identify samples within the box
- Two boxes may be stacked to fit together in one space in a 53mm freezer storage rack if using flat-capped PCR tubes

Description	PK	Cat. No.
PCR-Tube Cryobox 144 x 0.2ml Tubes	5	**9.401 095**

5

6



5 6 PCR-Coolers

Eppendorf

The PCR-Cooler acts as a thermochromic temperature self-indicator: pink or light-blue (depending on the model chosen) when temperature exceeds +7°C, violet or dark blue when ice-cold.

Description

The new Eppendorf PCR-Cooler reliably maintains a sample temperature of 0°C*for over an hour, changing colour when the temperature exceeds +7°C. Better than an ice bath, PCR-Cooler is simple to handle, space-saving and contamination-free, making it the perfect preparation for PCR reactions. The temperature of single tubes is indicated by the colour of the respective individual apertures. Furthermore, samples are prevented from freezing by the specially developed cone contour. Eppendorf PCR-Cooler: the cooling unit in the universal 96-well format for 0.2ml and 0.5ml PCR tubes, for tube strips, plates and for individual tubes. The Eppendorf PCR-Cooler is a compact, innovative solution for protecting, transporting and storing sensitive samples and obviously also ideal for safely stopping reactions.

Application note.

By changing colour from violet to pink or dark blue to light blue, the PCR-Cooler shows when the temperature has exceeded +7°C. The crucial factor for sample cooling is the well colour in the PCR-Cooler.

Description	PK	Cat. No.
PCR-Cooler, 0.2ml starter set (1 x pink, 1 x blue)	1	**9.283 576**
PCR-Cooler, 0.2ml pink	1	**9.283 577**
PCR-Cooler, 0.2ml blue	1	**9.283 578**
PCR tubes, 0.2ml, transparent	1000	**9.283 579**
twin.tec PCR Plate 96 semi-skirted, transparent	25	**9.283 595**
twin.tec PCR Plate 384 skirted, transparent	25	**9.283 596**

* With 2 hours precooling at -20°C.

E & OE.

1 CloneSaver™ Cards

GE Healthcare

- 96-well format for high throughput applications
- Stabilize BAC and plasmid DNA in one easy step from bacterial culture, resuspended colony, glycerol stock or purified plasmid DNA
- Clones can be rapidly screened by PCR without need for minipreps
- Plasmid DNA on Clone SaverCards is stable at room temperature for at least 4 years (real-time data)
- DNA is easily accessible for downstream applications such as transformations and PCR

Description	PK	Cat. No.
CloneSaver Resealable Multi-Barrier Pouch	50	**9.971 715**
CloneSaver Cards in 96-well Format	5	**9.971 716**

2 FTA® Cards

GE Healthcare

FTA Classic Cards
Four sample areas for storage of up to 4 x 125µl whole blood or 4 x 75µl plant homogenate per card. Convenient for multiple applications of the same specimen or collection of multiple animal or plant samples. Also available in Indicating (pink) FTA format.

FTA Mini Card
Two sample areas for storage of up to 2 x 125µl whole blood or 2 x 75µl plant homogenate per card. Convenient for protocols that require different locations for testing and archiving samples. Also available in Indicating (pink) FTA format.

FTA Micro Card
One sample area for storage of up to 125µl whole blood or 75µl plant homogenate per card. Recommended when only one sample is needed. Also available in Indicating (pink) FTA format.

FTA Gene Card
Three sample areas in a card frame for storage of up to 3 x 75µl whole blood or 3 x 50µl plant homogenate per card. Can be run in most automatic dispensing/pipetting systems when used with the FTA Gene Card Tray.

Indicating FTA Cards:
With colour indicator that changes from pink to white when sample is applied. useful for colourless samples.

Type	Description	PK	Cat. No.
FTA Classic Card	sample area 125µl / total 500µl	100	**9.971 708**
Indicating FTA Classic Card	sample area 125µl / total 500µl	100	**9.971 709**
FTA Mini Card	sample area 125µl / total 250µl	100	**9.971 710**
Indicating FTA Mini Card	sample area 125µl / total 250µl	100	**9.971 711**
FTA Micro Card	sample area 125µl / total 125µl	100	**9.971 712**
Indicating FTA Micro Card	sample area 125µl / total 125µl	100	**9.971 713**
FTA Gene Card	sample area 75µl / total 225µl	100	**9.971 714**

FTA Card Accessories

GE Healthcare

FTA Purification Reagent
Removes haem, PCR inhibitors, and other potential contaminants to ensure superior quality DNA for downstream analysis.

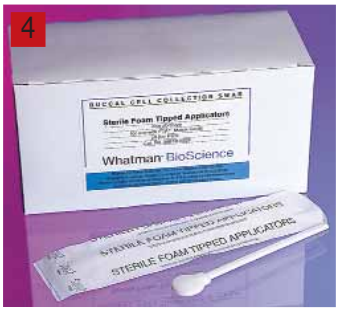
FTA Gene Card Tray
Holds two FTA Gene Cards for use in automatic liquid handling systems.

Sterile Foam Tipped Applicator
Easy-to-use applicator for the noninvasive collection and transfer of buccal cells to FTA Cards.

Multi-Barrier Pouches
For transporting or storing FTA Cards. Protects cards from environmental contamination. Tamper-evident seals maintain sample security for forensic samples. A resealable pouch is also available when multiple access to FTA cards is needed.

Storage Desiccant Packets
Ensure that FTA Cards remain dry during transport or storage. Contains indicator that changes colour to verify moisture adsorption.

9.971 718



9.971 719

Description	PK	Cat. No.
FTA Purification Reagent, 500 ml	1	**9.971 718** 3
FTA Gene Card Trays	20	**9.971 721**
Sterile Foam Tipped Applicator Swabs	100	**9.971 719** 4
Omniswab	100	**9.971 732**
Multi-Barrier Pouch, Large (for Classic Cards)	100	**9.971 733**
Desiccant (1 gm)	1000	**9.971 720**

1

1 Thermal Cycler MultiGene™ Mini

Labnet

MultiGene Mini is a compact and lightweight thermal cycler. This cycler is packed with features typically found only on larger thermal cyclers. Excellent accuracy and uniformity combine with fast ramping rates to provide quality results. An algorithm calculates sample temperature, based on volume, to control heating and cooling of the block. This means that samples reach programmed temperatures quickly, without any overshoot or lagging. Powerful Peltier units provide ramping rates as fast as 5°C/second.

Specifications:

Max. number of programmes:	99
Block capacities:	25 x 0.2ml tubes or 18 x 0.5ml tubes
Heated lid temperature	105°C
Max. heat/cool rate	5°C per sec/ 4°C per sec
Temp range/ uniformity:	4°C to 99°C
Dimensions (WxDxH):	218mm x 285mm x 178mm
Weight:	3.2kg
Supply requirements:	230V, 50/60Hz*

Description	PK	Cat. No.
MultiGene Mini Personal Thermal Cycler with 18 x 0.5 ml tube block	1	**9.595 341**
MultiGene™ Mini Personal with 24 x 0.2 ml tube block	1	**9.595 316**

*120V available on request

2

2 Thermal Cycler MultiGene™ OptiMax

Labnet

The Thermal Cycler MultiGene™ OptiMax replaces the MultiGene™ Gradient and therefore includes the same approved features like easy handling and reliability.

Improved features:

- Individual temperature setting for each block
- Faster speeds
- No condensation after overnight cooling at 4°C
- With TM Calculator for the determination of the melting point
- With PC Viewer for viewing the actual temerature profiles in real time
- With USB and RS232 interface
- 6-segment block temperature control with user able to select 6-segment temperatures independently, array in 4 x 4 well format
- Temperature and time increments/decrements
- Password protected programs

Specifications:

Sample capacity:	1 x 96 well plate, 12 x strip tubes (8 x 0.2ml), 96 x 0.2ml tubes
Programmable temperature range:	+4°C to +99.9°C
Temperature control:	Calculated or block
Temperature accuracy/uniformity:	±0.5°C/±0.5°C
Heating/cooling method:	Peltier
Max. heating/cooling rate:	±5°C/±3.5°C per second
Temperature range of 6-segment blocks:	+30°C to +99°C (can be set independently)
Maximum temperature difference between 6-segment blocks:	±24°C
Programmable lid temperature:	+60°C to +65°C, +100°C to +115°C
Program memory:	200 complete programs
User program folders:	50 sets
Dimensions (WxDxH):	240 x 420 x 250mm
Weight:	9kg
Supply requirements:	240V, 50/60 Hz*

Type	PK	Cat. No.
MultiGene™ OptiMax	1	**9.595 319**

*120V available on request

E & OE.

1 Thermal cyclers ³PRIMEBASE/³PRIMEX/³PRIMEG

Personal Thermal cycler - find space on any laboratory bench *Techne*

- Approved cycler with new design
- With and without gradient function
- Gradient upgrade from ³PRIMEX to ³PRIMEG
- 3.5" colour touch screen with graphical display
- Fast heating and cooling rates
- Height-adjustable and heatable lid, temperature from 100°C to 115°C, with ON/OFF switch and automatic switch off against overheating
- 1.000 programs storable
- Password protected
- Auto-Restart
- USB port
- 4 years warranty for the Prime Thermal cycler

Specifications

Block temperature:	+4°C to +100°C
Temperature gradient (only ³PRIMEG or ³PRIMEX with upgrade):	+30°C to +80°C
Max. Gradient:	+14°C
Block uniformity at 55°C:	<±0.3°C
Max. Heating rate:	3.0°C/s
Dimensions (WxDxH):	210 x 350 x 180

Type	Description	PK	Cat. No.
³PRIMEBASE	incl. block for 18 x 0.5ml tubes	1	**9.595 501**
³PRIMEBASE	incl. block for 24 x 0.2ml tubes	1	**9.595 502**
³PRIMEX	incl. block for 30 x 0.5ml tubes	1	**9.595 503**
³PRIMEX	incl. block for 48 x 0.2ml tubes	1	**9.595 504**
³PRIME gradient upgrade	Gradient upgrade from ³PRIMEX to ³PRIMEG	1	**9.595 505**
³PRIMEG	incl. block for 30 x 0.5ml tubes	1	**9.595 506**
³PRIMEG	incl. block for 48 x 0.2ml tubes	1	**9.595 507**

Purchase of this instrument conveys a limited non-transferable immunity for the purchaser's own internal research and development and applied fields other than human in vitro diagnostics under non-real-time thermal cycler patents of Applied Biosystems LLC.

2 Thermal cyclers PRIME/ PRIMEG

High throughput Thermal cycler - perfect for a high sample throughput *Techne*

- Approved cycler with new design
- With and without gradient function
- Gradient upgrade from PRIME to PRIMEG
- now available with combination block for 33 x 0.2 ml and 33 x 0.5 ml PCR tubes
- 5.7" colour touch screen with graphical display
- fast heating and cooling rates
- height-adjustable and heatable lid, temperature from 100°C to 115°C, with ON/OFF switch and automatic switch off against overheating
- 1000 programs storable
- Password protected
- Auto-Restart
- USB port
- 4 years warranty for the Prime Thermal cycler

Specifications

Block temperature:	+4°C to +100°C
Temperature gradient (PRIME only with upgrade):	+30°C to +80°C
Max. Gradient:	+29°C
Block uniformity at 55°C:	<±0.3°C
Max. Heating rate:	3.4°C/s
Dimensions (WxDxH):	240mm x 420mm x 240mm

Type	Description	PK	Cat. No.
PRIME	incl. block for 60 x 0.5ml tubes	1	**9.595 508**
PRIME	incl. block for 96 x 0.2ml tubes and 96well PCR plates	1	**9.595 509**
PRIME	incl. combination block for 33 x 0.2ml and 33 x 0.5 tubes	1	**9.595 513**
PRIME gradient upgrade	Gradient upgrade from PRIME to PRIMEG	1	**9.595 510**
PRIMEG	incl. block for 60 x 0.5ml tubes	1	**9.595 511**
PRIMEG	incl. block for 96 x 0.2ml tubes and 96well PCR plates	1	**9.595 512**
PRIMEG	incl. combination block for 33 x 0.2ml and 33 x 0.5 tubes	1	**9.595 514**

Purchase of this instrument conveys a limited non-transferable immunity for the purchaser's own internal research and development and applied fields other than human in vitro diagnostics under non-real-time thermal cycler patents of Applied Biosystems LLC.

1

9.595 515

Real-time PCR-system Prime Pro 48

NEW!

Techne

The new Prime Pro 48 real time PCR system from Techne (UK) is a high specification, economically priced real-time thermal cycler. The Prime Pro 48 system has a unique high thermal block uniformity (±0.1°C). This uniformity as well as validated sample volumes of down to 5µl enable an optimized reaction run time for 40 cycles down to only 15 minutes. The uniform temperature across the plate is achieved with a unique heating and cooling system that quickly enables a uniform temperature of ±0.1°C in every well of the block within a fraction of a second of reaching each well temperature. This high uniformity eliminates the need for triplicates which reduces reagent running costs. Prime Pro 48 accommodates a unique and economical 48-well PCR plate, the size of which is only 1/8 the size of a standard 96-well plate. The well format mirrors a 384-well plate therefore allowing the use of a 16-channel micropipette. The small plate cuts reagent costs in half whilst still producing a strong fluorescent signal. Applications include e.g. absolute and relative quantification, Allelic Discrimination and High Resolution Melt.

Features:
- Validated volume per well: 5 to 20 µl
- High temperature uniformity of ±0.1°C across the whole block instantly after every temperature change
- 40 cycles in 40 minutes before optimization, and down to only 15 minutes when optimized
- Genotype in 4 minutes with over 99% accuracy
- Patented "Adaptive LED Control" minimizes optical artifacts and prevents premature detector saturation
- Dual LED excitation (452nm to 486nm and 542nm to 582nm)
- 4 emission filters (505nm to 545nm, 562nm to 596nm, 604nm to 644nm, 665nm to 705nm)
- Data is always collected in all four filters for all wells
- Distinguishes 5000 and 10000 template copies with 99 percent confidence

Additional features:
- 48-well block
- MIQE compliant
- 400 analyte specific qPCR reagent kits available
- No calibration required
- Calibrated dyes: SYBR®, FAMTM, HEXTM, ROXTM, Cy®5.
- Additional dyes within the filter wavelength range are supported with no additional calibration required
- Unlimited software license
- 1 year warranty

Custom 48-well qPCR plates and corresponding seals have to be ordered separately.

Specifications

Temperature range:	30 to 100°C
Temperature stability:	±0.1°C
Temperature uniformity:	±0.1°C within 1sec
Average ramp rate:	5.5°C/sec
Dimensions (WxDxH):	345 x 310 x 320mm
Weight:	13.6kg

Type	PK	Cat. No.	
Prime Pro 48	1	**9.595 515**	1
PCR plates Prime Pro 48	50	**9.595 517**	
Plate seals Prime Pro 48	50	**9.595 516**	

E & OE.

1 UV/PCR cabinet UVT-B-AR

Grant

Economy bench-top model for protection against contamination during a variety of DNA/RNA procedures.
- UV surface irradiation, via single 25 W 254 nm open UV lamp
- Patented high intensity UV air cleaner, 25 m3/hour cleaner-recirculator continuous air flow with 1cm UV irradiation distance
- UVlamp in the upper hood disinfects the working area, inactivating DNA/RNA fragments during 15-30 min of exposure
- UV exposure control, 24 hour digital timer
- Convenient, easy to use digital timer for accurate control of UV exposure
- White lamp provides local illumination of the workplace to optimise visual control during operations
- Shock proof glass panels, metal framework and stainless steel work surface
- Automatic switch-off of open UV light when door opened
- Contains an integral power socket

Specifications

External dimensions (WxDxH):	690 x 585 x 555mm
Working area dimensions (WxDxH):	650 x 475mm
Weight:	32kg

Type	PK	Cat. No.
UVT-B-AR	1	**9.721 070**

UV sterilisation cabinets

NEW!

Cleaver Scientific

9.584 775

These UV Sterilisation Cabinets provide a convenient area for setting up PCR reactions in a nucleic acid free environment thus limiting PCR reaction contamination. Acting effectively as a low cost alternative to a clean room, the powerful UV lights on the cabinets denature nucleic acids in 5 to 30 minutes making them unsuitable for amplification. The cabinet incorporates safety features to prevent user exposure to UV light. The UV lights themselves are timer controlled and there are safety switches on the cabinets doors which turn off the UV lights when opened.

Specifications	**Maxi/Mini**
UV Lights:	4 x 15W
White Lights:	15
Dimensions (H x W x D):	770 x 560 x 420mm/510 x 560 x 350mm
Weight:	19kg/12kg

Type	Description	PK	Cat. No.
CSL-UVCAB	UV sterilisation cabinets Maxi, with timer, four UV lights and white light, no Tray	1	**9.584 774**
CSL-UVCABMINI	UV sterilisation cabinets Mini, with timer, UV light and white light, no Tray	1	**9.584 775**
Universal tray	white, 680 x 540mm	1	**6.258 034**
Radiation-use tray	yellow, 680 x 540mm	1	**9.584 788**

3 PCR Cabinets Type Airstream® SCR/PCR

Esco

Active PCR Cabinet with built-in UV Decontamination and true vertical laminar airflow.

- Average Airflow Velocity (adjustable): 0.3m/s
- HEPA filter with Prefilter
- The air cleanliness within the work zone is better than ISO Class 5
- Sentinel-Microprocessor maintains steady blower speed (only 0.9m and 1.2m models)
- Hinged polycarbonate front window
- Tempered glass side panel
- ISOCIDE™ antimicrobial coating on all painted surfaces minimizes contamination.
- Fluorescent lighting provides superior illumination of the work zone
- Build-in UV lamp with timer
- Pass-through ports in the back wall

More options, support stands on request.

Type	Size	External dimensions (W x D x H) mm	PK	Cat. No.
Airstream® SCR-2A1	0.6 m	730 x 617 x 950	1	**7.939 129**
Airstream® PCR-3A1	0.9 m	1035 x 617 x 950	1	**7.939 127**
Airstream® PCR-4A1	1.2 m	1340 x 617 x 950	1	**7.939 128**

1

1 Gel electrophoresis tank Battery Gel

Cleaver Scientific

The MSBGEL battery mini-gel is designed specifically with safety and cost in mind as no power supply is necessary.

Supplied with:
MSBGEL: Battery operated horizontal gel 6 x 7.5cm, 2 x 8 sample combs, casting gates, two 9 volt batteries.

Specifications

Gel dimensions (W x L):	6 x 7.5cm
Unit dimensions (W x L x H):	11 x 17 x 3.5cm
Max. sample capacity:	32 samples
Buffer volume:	50ml

Type	Description	PK	Cat. No.
MSBGEL	BatteryGel	1	**9.584 690**
MSBG-1-8	Comb 8 sample, 1mm	1	**9.584 692**
MSBG-1-16	Comb 16 sample, 1mm	1	**9.584 693**

2

2 Gel electrophoresis tank MiniRapide

Cleaver Scientific

The miniRapide is a completely self contained system designed for quick checks of samples. Gel casting, running and analysis are all performed in the same ultra compact unit. Buffer and gel volumes have been kept to a minimum and the parallel electrode arrangement allows ultra efficient current transfer, enabling resolution to be completed within 30 minutes. The UV transparent base allows direct viewing on a UV Transilluminator with no need for time consuming transfer and potential gel damage. Dual comb slots allow the loading of up to 40 samples per gel while multichannel pipette compatible combs further enhance the speed and convenience.

Supplied with: miniRapide, 10 x 8cm, 2 x 8 sample combs 1.5mm, electrodes and casting dams.

Specifications

Gel dimensions (W x L):	10 x 8cm
Unit dimensions (W x L x H):	15 x 15 x 4cm
Max. sample capacity:	40 samples
Buffer volume:	50ml

Type	Description	Sample volume µl	PK	Cat. No.
FMMS10	miniRapide		1	**9.584 680**
FMMS-8-1	Comb 8 sample, 1mm	40	1	**9.584 681**
FMMS-16-1	Comb 16 sample, 1mm	15	1	**9.584 682**
FMMS-20MC-1*	Comb 20 sample MC, 1mm	10	1	**9.584 683**
FMMS-8-1.5	Comb 8 sample, 1.5mm	60	1	**9.584 684**
FMMS-16-1.5	Comb 16 sample, 1.5mm	23	1	**9.584 685**
FMMS-20MC-1.5*	Comb 20 sample MC, 1.5mm	15	1	**9.584 686**

* Multichannel compatible.

3

3 Gel electrophoresis tank multiSUB Mini DUO

Cleaver Scientific

The multiSUB Mini is the smallest unit in the range, designed for low to medium numbers of samples. The small gel size maximises run economy but does not compromise versatility as two tray options are available, 7 x 7cm and 7 x 10cm, and combs ranging from preparative up to 16 samples. Simply by altering the gel tray or comb, this compact unit is capable of resolving up to 64 different samples, prepping 1ml of sample or separating sample bands over a distance of 9cm.

Supplied with: multiSUB Mini, 7 x 7cm & 7 x 10cm UV Tray, 2 x 8 sample combs 1mm, loading guides, electrodes and dams.

Specifications

Gel dimensions (W x L):	7 x 7cm and 7 x 10cm
Unit dimensions (W x L x H):	21 x 9 x 9cm
Max. sample capacity:	7 x 7cm tray, 32 samples 7 x 10cm tray, 64 samples
Buffer volume:	225ml

Type	Description	Sample volume µl	PK	Cat. No.
MSMINIDUO	multiSUB Mini DUO		1	**7.920 043**
MS7-8-1	Comb 8 sample, 1mm	25	1	**9.584 655**
MS7-12MC-1*	Comb 12 sample MC, 1mm	14	1	**6.232 523**
MS7-16-1	Comb 16 sample, 1mm	10	1	**6.227 253**
MS7-8-1.5	Comb 8 sample, 1.5mm	37	1	**6.227 144**
MS7-12MC-1.5*	Comb 12 sample MC, 1.5mm	20	1	**6.233 617**
MS7-16-1.5	Comb 16 sample, 1.5mm	15	1	**9.584 656**

* Multichannel compatible.

E & OE.

1 Gel electrophoresis tank multiSUB Midi DUO

Cleaver Scientific

With gel tray options of 10 x 7cm and 10 x 10cm, the multiSUB Midi has been designed for routine horizontal gel electrophoresis. Extending only the width of this unit allows more samples to be resolved per gel than the multiSUB Mini without a significant increase in buffer or gel volumes. A maximum of 100 samples per gel can be resolved making this unit ideal for those routinely checking medium numbers of samples over short to medium gel run lengths.

Supplied with**:** multiSUB Midi, 10 x 7cm & 10 x 10cm UV Tray, 2 x 16 sample combs, loading guides, electrodes and dams.

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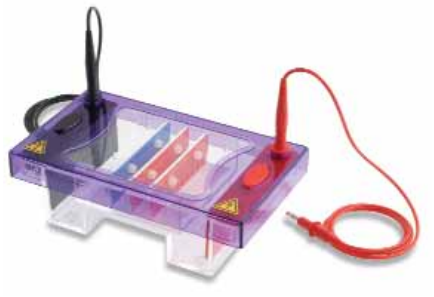


Specifications

Gel dimensions (W x Ll):	10 x 7cm and 10 x 10cm
Unit dimensions (W x L x H):	22 x 12.5 x 9cm
Max. sample capacity:	10 x 7cm tray, 50 samples 10 x 10cm tray, 100 samples
Buffer volume:	300ml

Type	Description	Sample volume µl	PK	Cat. No.
MSMIDIDUO	multiSUB Midi DUO		1	**6.238 115**
MS10-8-1	Comb 8 sample, 1mm	41	1	**9.584 657**
MS10-10MC-1*	Comb 10 sample MC, 1mm	27	1	**9.584 658**
MS10-12-1	Comb 12 sample, 1mm	23	1	**9.584 659**
MS10-16-1	Comb 16 sample, 1mm	16	1	**9.584 660**
MS10-20MC-1*	Comb 20 sample MC, 1mm	14	1	**9.584 661**
MS10-25-1	Comb 25 sample, 1mm	10	1	**9.584 662**

* Multichannel compatible.

2 3 Gel electrophoresis tank MultiSUB Choice

Cleaver Scientific

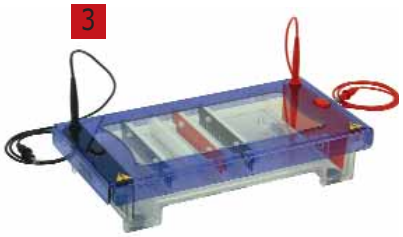
Gel size: 15 x 15cm (W x L). This unit is ideal for restriction fragment analysis, sample prep or checking of high number of samples. The multiSUB choice offers a high degree of versatility. Two additional tray options are available: 15 x 7cm and 15 x 10cm. Gel casting is easy by using casting dams.

- colour coded combs 0.75/1.0 /1.5/2.0mm
- 3, 4 or 6 comb positions for maximum 210 samples
- low buffer volume: 500ml
- injection moulded construction: durable, leakproof environment for complete safety and long life
- simple gel casting by using dams

Supplied with:
MSCHOICE15: MultiSUB Choice, 15 x 15cm UV Tray, 2 x 20 sample combs, loading guides, electrodes and dams.
MSCHOICETRIO: MultiSUB Choice Trio, 15 x 7, 10 & 15cm UV Tray, 2 x 20 sample combs, loading guides, electrodes and dams.
MSCHOICEST20: MultiSUB Choice Stretch 20, 15 x 20cm UV tray, 4 x 28 sample combs, loading guides, electrodes and dams.
MSCHOICEST25: MultiSUB Choice Stretch 25, 15 x 25cm UV tray, 4 x 28 sample combs, loading guides, electrodes and dams.

2

3



Specifications

Unit dimensions (w x l x h):	26.5 x 17.5 x 9cm 41 x 17.5 x 9cm (Stretch models)
Max. sample:	15 x 7 cm Tray - 70 Samples 15 x 10 cm Tray - 140 Samples 15 x 15 cm Tray - 210 Samples 15 x 20 cm Tray - 280 Samples 15 x 25 cm Tray - 350 Samples
Buffer volume:	500ml 1000ml (Stretch models)

Type	Description	Sample volume µl	PK	Cat. No.
MSCHOICE15	MultiSUB Choice 15		1	**9.584 651**
MSCHOICETRIO	MultiSUB Choice Trio		1	**6.239 273**
MSCHOICEST20	MultiSUB Choice Stretch 20		1	**9.584 663**
MSCHOICEST25	MultiSUB Choice Stretch 25		1	**9.584 664**
MS15-20-1	Comb 20 sample, 1 mm	21	1	**6.234 451**
MS15-35-1	Comb 35 sample, 1 mm	10	1	**6.238 277**
MS15-18MC-1*	Comb 18 sample MC, 1 mm	11	1	**9.584 665**
MS15-30MC-1*	Comb 30 sample MC, 1 mm	13	1	**6.238 278**
MS15-20-1.5	Comb 20 sample, 1.5 mm	32	1	**6.233 618**
MS15-18MC-1.5*	Comb 18 sample MC, 1.5 mm	17	1	**9.584 667**
MS15-30MC-1.5*	Comb 30 sample MC, 1.5 mm	19	1	**9.584 666**

* Multichannel compatible.

1

1 Gel electrophoresis tank MultiSUB Maxi DUO/Maxi 25

Cleaver Scientific

The multiSUB Maxi is primarily designed for resolution of high numbers of samples such as from Cloning or PCR. The multiSUB Maxi allows ultra high-resolution separations over extended runs. Tray sizes correspond to standard blotter sizes. It also allows easy sample transfer onto a membrane for further analysis. Four gel tray sizes are available: 20 x 10cm, 20 x 15cm, 20 x 20cm and 20 x 25cm. Multichannel pipette compatible, 40 combs facilitates speed loading of up to 440 samples per gel. 50 sample combs allow maximum sample capacity of 550 samples per gel.

Supplied with:
MSMAXIDUO: multiSUB Maxi, 20 x 10 and 20 x 20cm UV Tray, 2 x 20 sample, 1mm thick combs, casting dams, electrodes and loading guides.
MSMAXI25: multiSUB Maxi, 20 x 25cm UV Tray, 2 x 20 sample, 1mm thick combs, casting dams, electrodes and loading guides.

Specifications

Gel dimensions (w x l):	10 x 7cm and 10 x 10cm
Unit dimensions (w x l x h):	22 x 12.5 x 9cm
Max. sample:	10 x 7cm tray, 50 samples
Capacity:	10 x 10cm tray, 100 samples
Buffer volume:	300ml

Type	Description	Sample volume µl	PK	Cat. No.
MSMAXIDUO	MultiSUB Maxi DUO		1	**9.584 670**
MSMAXI25	MultiSUB Maxi 25		1	**9.584 671**
MS20-20MC-1*	Comb 20 sample MC, 1mm	27	1	**9.584 672**
MS20-30-1	Comb 30 sample, 1mm	17	1	**9.584 673**
MS20-40MC-1*	Comb 40 sample MC, 1mm	11	1	**9.584 674**
MS20-50-1	Comb 50 sample, 1mm	10	1	**9.584 675**
MS20-20MC-1.5*	Comb 20 sample MC, 1.5mm	41	1	**9.584 676**
MS20-30-1.5	Comb 30 sample, 1.5mm	26	1	**9.584 677**

* Multichannel compatible.

2

2 3 Gel electrophoresis tank MultiSUB midi-96

Cleaver Scientific

The multiSUB Midi 96 Gel System is ideal for high throughput electrophoresis of PCR products or samples containing a small number of DNA bands. Its 10 x 12cm (W x L) gel dimensions and 96-well comb block format correspond to the standard micro plate configuration, with additional lanes for markers. Two different types of comb are available: one which has 8 wells and one additional lane for DNA markers and one which has 8 wells and 2 additional lanes for markers. The offset layout of the wells allows a maximum run length of 1.8cm per well, resulting in improved separation. multiSUB Midi 96 can accommodate samples from a 96-well plate; samples can be loaded directly using 8-channel pipettes. As with all multiSUB units, leak-proof casting is simplified using the supplied casting dams while their ultra-compact size minimises buffer usage and bench space requirements. MSMIDI96 Stretch Systems are also available for those users requiring an extended run length per well of up to 3.6cm.

Supplied with:
MSMIDI96: Multi Sub Midi96, UV tray, Comb block with 12 x 8 sample, 1mm thick combs, electrodes and casting dams.
MSMIDI96ST: Multi Sub Midi96 STRETCH, UV tray, Comb block with 12 x 8 sample, 1mm thick combs, electrodes and casting dams.

3

Specifications

	MSMIDI96/MSMIDI96ST
Gel dimensions (W x L):	10 x 12cm/10 x 24cm
Unit dimensions (WxDxH):	22 x 12.5 x 9cm/46.5 x 12.5 x 8cm
Max. sample capacity:	96 samples plus 1 or 2 marker lanes
Buffer volume:	300ml/700ml

Type	Description	PK	Cat. No.
MSMIDI96	MultiSub Midi96	1	**9.584 720**
MSMIDI96-8-1.5-CB*	Comb 8 sample MC + 1 Marker, 1.5mm thick COMB BLOCK	1	**9.584 721**
MSMIDI96-8-1/2M-CB*	Comb 8 sample MC + 2 Marker, 1mm thick COMB BLOCK	1	**9.584 722**
MSMIDI96-8-1.5/2M-CB*	Comb 8 sample MC + 2 Marker, 1.5mm thick COMB BLOCK	1	**9.584 723**
MSMIDI96ST	MultiSub Midi96 STRETCH	1	**9.584 724**
MSMIDI96ST-8-1.5-CB*	STRETCH Comb 8 sample MC + 1 Marker, 1.5mm thick COMB BLOCK	1	**9.584 725**
MSMIDI96ST-8-1/2M-CB*	STRETCH Comb 8 sample MC + 2 Marker, 1mm thick COMB BLOCK	1	**9.584 726**
MSMIDI96ST-8-1.5/2M-CB*	STRETCH Comb 8 sample MC + 2 Marker, 1.5mm thick COMB BLOCK	1	**9.584 727**

* Multichannel compatible.

E & OE.

1 2 Real-time horizontal gel electrophoresis system runVIEW

Cleaver Scientific

- Versatile, self-contained system on the market for real-time horizontal gel electrophoresis
- System includes everything except chemicals and reagents to run horizontal SYBR- and EtBr-stained gels in real-time
- Combines the flexibility and high resolution capability of the MSCHOICE system with the time- and space saving convenience of having the power supply and gel illuminator integrated within one highly compact bench top unit
- Optional dark room with 12.1 megapixel digital camera fits directly over the base unit and gel tank to allow gels to be imaged either as bands migrate in real-time or at the end of the electrophoresis run
- Includes accessories for standard gel electrophoresis and for size fractionation and simplified real-time gel free DNA band extraction and purification
- runVIEW Gel System with bluVIEW Lid Design: Orange spectral emission filter with condensation-free viewing panel.
- Extractor fan in the bluVIEW lid eliminates condensation to optimise DNA visualisation and resolution during electrophoresis.

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Included Double-sided Combs: 2x 1-sample/2-sample preparatory; 2x 4-sample preparatory/16-sample combs; 4x 20- /28- sample multichannel compatible screening. Comb Thickness: 1mm. Extra-thick 2x 4- and 2x 6-sample 3mm preparatory combs are also included.

Specifications

runVIEW Viewing Dock

Blue Light Wavelength:	470nm
Voltage/Resolution:	25-150V/1V
Current/Resolution:	300mA/1mA
Power:	30W
Timer:	1 to 999 min (with alarm)
Dimensions (WxDxH):	29.3 x 22.0 x 8.0cm
Power supply:	100-240V, 50/60Hz

runVIEW Gel System

Gel Dimensions (W X L):	15 x 7cm, 15 x 10cm and 15 x 15cm
Unit dimensions (W X D X H):	26.5 x 17.5 x 9.0cm
Buffer volume:	500ml

Type	Description	PK	Cat. No.
CSL-RVMSCHOICE7	runVIEW system complete with 15 x 7cm gel tray, 1 set of casting dams and 8 double-sided combs	1	**9.584 764**
CSL-RVMSCHOICE10	runVIEW system complete with 15 x 10cm gel tray, 1 set of casting dams and 8 double-sided combs	1	**9.584 765**
CSL-RVMSCHOICE15	runVIEW system complete with 15 x 15cm gel tray, 1 set of casting dams and 8 double-sided combs	1	**7.920 135**
CSL-RVMSCHOICETRIO	runVIEW system complete with 15 x 7, 15 x 10 and 15 x 15cm gel trays, 3 sets of casting dams and 8 double-sided combs	1	**9.584 766**
CSL-RVBSBVLID	runVIEW base station and bluVIEW lid	1	**9.584 767**
CSL-RVGELDOC	runVIEW gel documentation hood with 12,1MP camera	1	**9.584 768**

3 Power supply nanoPAC-300 Mini for gel electrophoresis tanks

Cleaver Scientific

The nanoPAC-300 is capable of running all Cleaver Scientific horizontal multiSUB™ systems and vertical omniPAGE mini gel systems.

- Maximum constant current output of 400mA
- Constant voltage up to 300V
- Adjustable in 1V and 1mA increments
- Two parallel outputs
- Continuous run or timed setting up to 999 minutes
- Automatic safety shutdown
- Alarm function
- Easy-to-clean polycarbonate housing
- 3-digit LED display

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Type	Supply requirements	Rating W	PK	Cat. No.
nanoPAC-300 Mini	300V / 400mA	60	1	**6.253 368**

Further power supplies please see page 1211.

1 Enduro™ power supplies

NEW!

Labnet

Dependable performance, intelligent control, for the connecting of different chamber systems.
- Select constant voltage or constant current mode
- Automatic crossover between modes protects gels.
- Compact, lightweight and stackable
- Designed for safety
- Extremely quiet operation

Specifications	**Model 300 V**
Output voltage range/increments	2-300V/1V 4-500mA/1mA 90W max/na
Timer	1-999 minutes or continuous
Programmable	No
Dimensions/Wt	19 x 25 x 8 cm/2.2kg
Input voltage	120-230V
	Model 250 V
Output voltage range/increments	5-250V/1V 10-3.000mA/10mA 1-300W/1W
Timer	1 min to 99h 59 min or continuous
Programmable	10 steps/program, 20 program memory
Dimensions/Wt	19 x 25 x 8 cm/2.5kg
Input voltage	120-230V

Description	PK	Cat. No.
Enduro 300 V power supply	1	**9.595 314**
Enduro 250 V power supply	1	**9.595 306**

Additional accessories are available.

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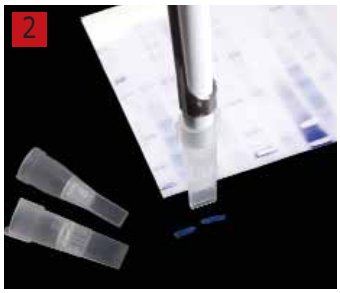


2 Disposable Gel Excision Tips GelX

Cleaver Scientific

Widely acclaimed as an excellent tool for gene cloning, Cleaver Scientific GelX disposable gel excision tips offer a unique and convenient way to excise nucleic acid and protein bands from gels. GelX tips allow completely safe and contamination free removal of the gel band of interest without the need to handle potentially dangerous scalpels. The gel band is neatly extracted and contained in the tip, when it is then dispensed into a tube for further analysis. Once used, the tip is ejected for disposal.
- Eliminates scalpel damage to transilluminator or gel tray
- Designed for removing bands from agarose and protein gels
- One-handed operation
- Push button gel and tip release mechanism
- Fits standard 1000µl pipettes
- Autoclavable, and DNase and RNase free
- Sterile versions also available

Type	Dimensions mm	Description	PK	Cat. No.
CSL-GELX4	4 x 1	1 bag	250	**6.237 751**
CSL-GELX4RACK	4 x 1	5 racks of 48 pieces	240	**6.237 752**
CSL-GELX6.5	6.5 x 1	1 bag	250	**9.584 699**
CSL-GELX6.5RACK	6.5 x 1	5 racks of 48 pieces	240	**7.900 620**

E & OE.

1 Agarose for gel electrophoresis

Cleaver Scientific

AG agaroses are suitable for routine analysis of nucleic acids. They combine tensile strength with low electroendosmotic effects to achieve high resolving power for a wide size range of nucleic acid fragments.
AG agaroses are also very environmentally friendly, being manufactured by a process which excludes organic solvents.
Low melting point agarose is available (please enquire).

Specifications

CAS:	9012-36-6
Appearance:	White to off-white powder
EEO:	<0.13
Gelling Point:	36°C ±1.5°C (1.5 % gel)
Melting Point:	88°C ±1.5°C (1.5 % gel)
Solubility:	Clear, colourless solution at 1g in 100ml water
Moisture:	≤10%
Gel Strength:	>1200 g/cm² (1% Gel)
Sulphate:	≤0.20%
DNase, RNase, Protease, Endonuclease:	None Detected

Type	Capacity g	PK	Cat. No.
CSL-AG100	100	1	**9.584 695**
CSL-AG500	500	1	**9.584 696**
CSL-AG1000	2 x 500	1	**9.584 697**
CSL-AG2000	4 x 500	1	**9.584 790**
CSL-AG5000	10 x 500	1	**9.584 791**
CSL-AG10KG	20 x 500	1	**9.584 792**
CSL-AG20KG	40 x 500	1	**9.584 793**

2 UV lamps

Vilber Lourmat

- Filtered and unfiltered*UV lamps with different wave lengths and power levels for a broad range of applications
- Models with wave length selector suited for multiple applications

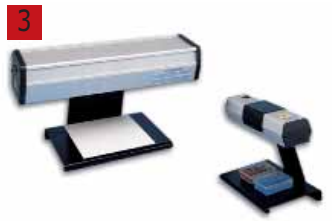
Further models on request.

Note: please order lamp holder separately.

Type	Description	Filter size mm	Wave-length nm	No. of Tubes	Tubes W	Spare tubes Type	PK	Cat. No.
BVL-115.L	Single wavelength	295 x 66	365	1	15	J	1	**9.971 936**
BVL-215.G	UV sterilization lamp*	-	254	2	15	I	1	**9.971 915**
BVL-208.G	UV sterilization lamp*	-	254	2	8	F	1	**9.971 935**
BVL-4.LC	wavelength selector	70 x 48	365 / 254	1 / 1	4	B / A	1	**9.971 917**
BVL-6.LC	wavelength selector	145 x 48	365 / 254	1 / 1	6	D / C	1	**9.971 918**
BVL-8.LM	wavelength selector	220 x 48	365 / 312	1 / 1	8	G / E	1	**9.971 937**

3 Lamp holder for UV lamps

Vilber Lourmat



Type	For Type	PK	Cat. No.
SVL-6	BVL-4, BVL-8, BVL-6	1	**9.971 921**
SVL-30	BVL-115, BVL-215	1	**9.971 922**

4 Handle for UV lamps

Vilber Lourmat

Type	For Type	Mounting	PK	Cat. No.
SMU	BVL-4, BVL-8, BVL-6	clip	1	**9.971 938**
SMA	BVL-4, BVL-8, BVL-6	handle	1	**6.230 416**

Foils please see page 180.

Spare UV tubes - please see page 1199.

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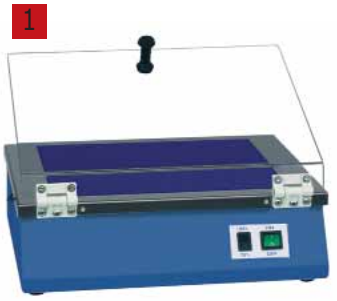

1 Compact UV transilluminators

Vilber Lourmat

- Compact design (34 x 28cm)
- Metal housing, with stainless steel filter frame and "long life" filter
- Modern technology, highest quality manufacture
- Single or dual wavelength models available
- BECXF models have intensity selector (Hi/Lo)

Type	Description	Filter size mm	Wave-length nm	No. of Tubes	Tubes W	Spare tubes Type	PK	Cat. No.
BECXF-20.M	Hi / Lo Intensity	200 x 200	312	6	8	E	1	**9.971 910**
BECXF-26.M	Hi / Lo Intensity	210 x 260	312	6	8	E	1	**9.971 911**
BTCP-20.LM	Multi-band	200 x 200	365 / 312	5 / 6	8	D / E	1	**9.971 912**
BTCP-20.MC	Multi-band	200 x 200	254 / 312	5 / 6	8	E / F	1	**9.971 913**
BTCP-26.LM	Multi-band	210 x 260	365 / 312	5 / 6	8	G / E	1	**9.971 914**

2

2 UV transilluminators

Cleaver Scientific

Standard features include a high/low intensity safety switch and an efficient starter that allows each of the six 8W UV tubes to energise quickly without flickering, while special filter glass minimises unwanted background light. All of these features maximise contrast and sensitivity, allowing even the faintest fluorescent gels to be viewed. Two dual wavelength models offer added flexibility and convenience.

Type	Filter size mm	Wave-length nm	Tubes	Spare tubes Type	PK	Cat. No.
CSLUVTS254	210 x 210	254	6 x 8W	F	1	**9.584 770**
CSLUVTS312	210 x 210	312	6 x 8W	E	1	**6.231 832**
CSLUVTS365	210 x 210	365	6 x 8W	G	1	**9.584 771**
CSLUVTSDUO	210 x 210	254/365	6 x 8W	F / G	1	**9.584 772**
CSLUVTSDUO312	210 x 210	254/312	6 x 8W	F / E	1	**9.584 773**

3

3 Blue-LED-Transilluminators

biostep

UV protection shield optional.
Intensity setting 10 to 100%

Type	Filter size mm	Wave-length nm	Tubes	PK	Cat. No.
BST-20G-D2R	200 x 200	470	LED Matrix 504	1	**4.007 023**
BST-30G-D4R	230 x 300	470	LED Matrix 756	1	**4.007 024**

4

4 UV transilluminators - Professional Line

Vilber Lourmat

- high intensity output for high UV intensities
- metal housing, with stainless steel filter frame and "long life" filter
- modern technology, highest quality manufacture
- intensity selector (Hi/Lo)
- integral UV safety screen
- top dimensions: 47 x 33cm

Type	Description	Filter size mm	Wave-length nm	No. of Tubes	Tubes W	Spare tubes Type	PK	Cat. No.
BETXF-20.M	Hi/Lo Intensity	200 x 200	312	6	15	H	1	**9.971 906**
BETXF-26.M	Hi/Lo Intensity	210 x 260	312	6	15	H	1	**9.971 907**

E & OE.

1 UV transilluminators ENDURO™

Labnet

The ENDURO™ UV Transilluminators represent a great new imaging product true to ENDURO™ name. These UV transilluminators have been designed for rugged use and durability with exceptional performance. The use of UV Black Glass minimizes the striping effect seen on many UV transilluminators. This provides a more uniform background for gel imaging. Conventional UV shields leak some UV (~8%), but the Enduro UV transilluminators allow no leakage.

- Compact size with 210mm x 260mm viewing area
- Available in single or dual wavelength models
- Unique heavy duty hinge design can be held in place at any angle for gel cutting
- UV shield fully protects user from UV light
- Uniform UV Black Glass provides improved imaging contrast

Spare tubes available on request.

Type	Filter size mm	Wave-length nm	Tubes W	PK	Cat. No.
U1001	210 x 260	302	6 x 8	1	**9.595 345**
U1002	210 x 260	302 / 365	5 x 8 / 6 x 8	1	**9.595 346**

Spare tubes for UV instruments and UV lamps

Suitable for instruments from Vilber Lourmat, Cleaver Scientific and biostep (instruments of other suppliers on request).

Type	Wave-length nm	Tubes W	For Type	PK	Cat. No.
A	254	4	BVL-4.LC	1	**6.230 463**
B	365	4	BVL-4.LC	1	**6.230 464**
C	254	6	BVL-6.LC	1	**6.230 465**
D	365	6	BVL-4.LC	1	**6.224 405**
E	312	8	BECXF-20.M, BECXF-26.M, BTCP-20.LM, BTCP-20.MC, BTCP-26.LM, CSLUVTS312, CSLUVTSDUO312	1	**6.225 934**
F	254	8	BVL-208.G, CSLUVTS254, CSLUVTSDUO, CSLUVTSDUO312	1	**6.242 036**
G	365	8	BVL-8.LM, BTCP-20.LM, BTCP-26.LM, CSLUVTS365, CSLUVTSDUO	1	**6.240 332**
H	312	15	BVL-215.M, BETXF-20.M, BETXF-26.M	1	**6.232 337**
I	254	15	BVL-215.G	1	**6.237 967**
J	365	15	BVL-115.L	1	**6.228 209**

2 Gel documentation system Doc-Print VX5

Vilber Lourmat

- Compact, PC-independent gel documentation system
- Robust and durable
- Easy handling, even with wet gloves
- Large TFT display, excellently readable
- Context-sensitive task buttons, quick-shot button
- Highly-sensitive scientific camera for high imaging quality (2.0 MP/16-Bit)

All models with the following standard components:
- Sensitive CCD camera, zoom, UV spectral filter, hood
- Control unit with integrated display and USB ports
- Free PC analysis software

Type	Description	PK	Cat. No.
DP VX5	With standard components	1	**7.930 022**
DP VX5-P	With standard components and thermal printer	1	**7.930 023**
DP VX5-20.M	With standard components and transilluminator BECXF-20.M	1	**9.971 928**
DP VX5-P-20.M	With standard components, thermal printer and transilluminator	1	**9.971 929**

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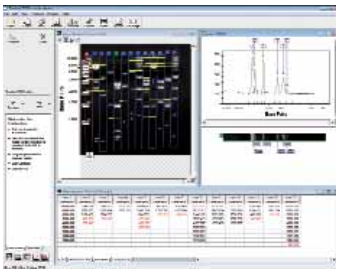

1 2 Gel documentation system microDOC with UV-Transilluminator

Cleaver Scientific

Recently upgraded with a new 12.1 megapixel digital CMOS camera to guarantee superb resolution, the microDOC is the researcher's choice for a simple ultra-compact gel documentation system that meets constraints in both budget and space within the laboratory. A large 8" TFT screen enables images, including agarose and fluorescent gels, colorimetric gels, autoradiography film and blotting membrane, to be captured in colour, clearly and easily. The system is computer-free and supplied with a 4GB storage card and 58mm ethidium bromide filter as standard, while an optional SYBR filter is also available. Files are saved onto the 4GB storage card in RAW, TIFF-RGB and JPEG formats and may be transferred to computer for analysis with the highly recommended TotalLab™ 1D software.

microDOC BASIC: The microDOC BASIC is a simple low-cost system comprising a lift-off dark room hood and 12.1 megapixel digital camera, through which the gel is viewed directly. This system can be supplied with optional TotalLab 1D Analysis Software and any one of the 21 x 21cm transilluminators (please enquire).

TotalLab™ 1D software: is supplied only as part of a complete package with each of the microDOC and transilluminator options. Its main functions include: lane creation, background subtraction, band detection, profile deconvolution, and molecular size, pI and quantity calibration. More sophisticated TotalLab™ Quant and Phoretix standalone software options are available for 1D applications that require band matching, array, colony counting and image ToolBox functionalities.

Camera:
- File Format Design rule for Camera File system, DPOF (version 1.1) compliant
- Focus-Area Selection AF mode and manual focus are available
- Hood (excludes MicroDOC Basic/1D models)
- Multi-Power Source For camera, Inner light lamp, TFT screen
- Safety Door Switch Automatically disconnects UV transilluminator, while opening the chamber door during operation
- with Video and Audio Input

Printer (option): The Mitsubishi P93 is a high speed, high resolution thermal printer that is perfectly suited to printing images directly from the microDOC. Connected to the microDOC by a BNC cable, the Mitsubishi P93 prints 325dpi images, up to 133 x 99mm in size. Thermal printer paper is also available.

Specifications Camera:

Effective Pixels:	approx. 12.1 megapixels
Type CMOS:	CMOS 1/1.7", approx. 12.1 million pixels
Lens:	6.1 (W) - 30.5 (T) mm (35mm film equivalent: 28 (W) - 140 (T) mm)
Maximum Aperture:	f/2.8 (W) - f/4.5(T)
Image Resolution:	640 x 480 up to 4.000 x 3.000
Data Type Still images:	Exif 2.3(JPEG), RAW (CR2)
Movies:	MOV (Image data: H264 ; Audio data: Linear PCM (stereo))
Filter:	Ethidium Bromide or SYBR Green (58mm)
Inner White Light:	2x 3W white light LED (excl. MDOC Basic Models)
Monitor:	8" TFT liquid crystal screen
Display Format:	960 x 234mm
Luminance:	350 cd/mm
Display Mode:	NTSC/PAL mode switchable
Chamber Dimension (WxDxH):	290 x 220 x 320mm
Rated Voltages:	110 - 220V
Weight Approx.	6.1 kg

Description	PK	Cat. No.
Compact Gel documentation system	1	**6.231 823**
microDOC with UV-Transilluminator 312nm	1	**9.584 755**
microDOC with UV-Transilluminator 254/312nm	1	**9.584 756**
microDOC with UV-Transilluminator 254/365nm	1	**9.584 757**
microDOC basic system with lift-off dark room hood and camera only	1	**9.584 758**
Compact Gel documentation system*	1	**9.584 759**
microDOC with UV-Transilluminator 312nm*	1	**9.584 760**
microDOC with UV-Transilluminator 254/312nm*	1	**9.584 761**
microDOC with UV-Transilluminator 254/365nm*	1	**9.584 762**
microDOC basic system with lift-off dark room hood and camera only*	1	**9.584 763**

* incl.Analysis Software TotalLab1D.

E & OE.

1 2 Gel documentation system omniDOC/omniDOCi

NEW!

Cleaver Scientific

The omniDOC offers high performance gel documentation and analysis at a relatively low cost. A high resolution 5 mega pixel camera with slide-out UV transilluminator, and optional blue epi-illumination module and white light table, makes the omniDOC suitable for imaging most fluorescent and colorimetric gels, while a USB port requires a cable to connect the dark room assembly to an external PC for control. Imaging applications are made easy by a pre-focused camera that requires little or no manual adjustment, while simple one-click image acquisition and analysis software guides the user through every step of the gel documentation process. A front LED indicator panel reveals at a glance the light source in use, whereas a viewing screen with universal filter and spring-loaded cover facilitates safe and convenient gel inspection. Simply install the omniDOC image acquisition and analysis software on a laptop or tablet, place the gel on the transilluminator or white light table within the darkroom, and then begin image capture, using your preferred excitation source and filter, either by pressing' the tabs on the omniDOC's front panel colour touchscreen, or by following the prompts within the software on your laptop or tablet. Once image acquisition is complete the gel may be analysed immediately using the complimentary analysis software included, or saved for later to perform analysis at a more convenient time and place. The software is downloadable as an app to iPAD, and Windows and Samsung Android tablets to provide full touchscreen remote control, making the omniDOCi probably the most portable and versatile imaging system on the market.

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OMNIDOC and OMNIDOCi features:

- Pre-focused 5 mega pixel camera with auto-exposure for almost instantaneous high resolution gel imaging; CMOS sensor for improved light sensitivity
- 6mm lens, F1.2 aperture size, with manual adjustment
- Interchangeable filter slide with 620nm ethidium bromide filter as standard; 520, 560 and 580nm filter options available for runSAFE, SYBR stain and other fluorescence applications
- Viewing pane with universal amber filter for gel inspection, which may be covered by a spring-loaded panel during documentation
- Internal white LED - aids gel positioning and focusing
- Slide-out 312nm transilluminator; uses optional plug-in white light table for coomassie, silver-stain and other colorimetric gels
- Large 210 x 260 m filter area
- Accessory white light table and blue lights allow easy switching between ethidium bromide, safe stained and protein gels
- Dark room assembly with corrosion resistant ABS construction
- Safety switch prevents accidental UV exposure when opening front door panel
- Power on-off switch
- USB port for PC connectivity in omniDOC, and used for maintenance and installation of updates in omniDOCi
- Wi-Fi connection for wireless remote control and image transfer to complimentary image acquisition and analysis software downloadable as an App (in omniDOCi models only) or supplied on disc for installation onto a laptop or PC (omniDOC and omniDOCi)

OMNIDOCi: OMNIDOC plus benefit of wireless connectivity to a remote laptop or tablet
omniDOCSAFE: OMNIDOC plus Blue LED Epi-illumination and 520, 560 & 580nm filters
omniDOCiSAFE: omniDOCSAFE plus benefit of wireless connectivity to a remote laptop or tablet

Type	Description	PK	Cat. No.
OMNIDOC	with 620nm (EtBr) emission filter, 312nm UV transilluminator and USB cable	1	**6.263 221**
OMNIDOCSAFE	as OMNIDOC plus Blue LED Epi-illumination Module, and 520, 560 and 580nm filters	1	**6.265 278**
OMNIDOCi	with 620nm (EtBr) emission filter, 312nm UV transilluminator and USB cable	1	**6.265 279**
OMNIDOCiSAFE	as OMNIDOCi plus Blue LED Epi-illumination Module, and 520, 560 and 580nm filters	1	**6.265 280**

3 Gel documentation system DP-1100

Vilber Lourmat

- PC-independent gel documentation system with compact, high-quality darkroom made of metal
- Robust and durable
- Easiest handling, even with wet gloves
- Large TFT display, excellently readable
- Context-sensitive task buttons, quick-shot button
- Highly-sensitive scientific camera for high imaging quality (2.0 MP/16-Bit)
- Sensitive CCD camera, zoom, UV spectral filter
- Darkroom with filter wheel, integrated, completely extendable transilluminator BECXF-26.M with automated UV security switch
- Control unit with integrated display and USB ports
- Free PC analysis software

3

Type	Description	PK	Cat. No.
DP-1100	With standard components	1	**9.971 930**
DP-1100-P	With standard components and thermal printer	1	**7.930 095**

1

1 Vacuum concentrator, Concentrator plus™

Eppendorf

The new Concentrator plus features a new LCD display and user-friendly control panel with clearly labeled function keys.
The new Concentrator plus from Eppendorf is available in two configurations:
- Complete system with an integrated service-free diaphragm pump
- Basic concentrator for connecting to an existing vacuum.

The Concentrator's heating technology optimises the evaporation process. No matter which configuration you choose, you're assured of quick and efficient-yet gentle-vacuum concentration of your samples (e.g. DNA/RNA, proteins). The complete system includes a vapour condenser that purifies the exhaust air by up to 85%. This serves as protection against unpleasant vapours.

2

9.776 623

Specifications	**Complete system/Basic device**
Max. power consumption:	350W/150W
Dimensions (WxDxH):	33cm x 58cm x 29cm/33cm x 37cm x 23cm
Weight:	31.5 kg/16.5 kg
Vacuum:	20hPa (20mbar)
Fixed rotation speed:	1.400rpm
Tube sizes:	0.2ml - 50ml
Capacity:	max. 144 tubes 2 microplates

Description	PK	Cat. No.
Complete system with integr. membrane vacuum pump and 48 x 1.5ml / 2.0ml fixed angle rotor	1	**9.776 620**
Complete system with integr. membrane vacuum pump, with connection for external units	1	**9.776 621**
Complete system with integr. membrane vacuum pump, w/o rotor	1	**9.776 622**
Single unit with 48 x 1.5ml / 2.0ml fixed angle rotor	1	**9.776 623** 2
Rotor F-35-6-30 for 6 x 15ml Falcon tubes	1	**9.776 624**

3

9.776 490

Rotors for Concentrator plus™

Eppendorf

Type	Description	PK	Cat. No.
F-45-48-11	for 48 tubes 1.5/2.0ml (11 x 41/11 x 47mm)	1	**9.776 465**
F-45-8-17	for 8 tubes 15ml (Falcon®) (17 x 120mm)	1	**9.776 490** 3
A-2-VC	for 2 x 96 tubes 0.2ml (128 x 86 x 27 mm)	1	**9.776 496**

Accessories for Concentrator Plus™

NEW!

Eppendorf

Description	PK	Cat. No.
Kit for upgrading from basic concentrator to complete system	1	**9.776 533**
Spacer for using fixed angle rotors in sandwich mode	1	**9.776 534**
CombiSlide® Adapter	1	**9.776 451**
Adapter, 0.5ml reaction tube and 0.6ml microtainer	6	**9.776 488**
Adapter for 0.2ml PCR tubes, for F-45-24-11	6	**9.776 504**
Work tray for 96 x 0.2ml PCR tubes	10	**9.283 623**
Frame for work tray	5	**9.283 624**

4

4 Rotational-Vacuum-Concentrator SpeedDry 2-18 CDplus Package

Christ

Inexpensive and compact table-top unit for smaller sample volumes, e.g. for gentle concentration of DNA/RNA, proteins in ethanol/methanol/water solutions and similar analytical steps.
- Simple operation with the push of a button: interface CDplus, automatic sequence for start and stop, vacuum on and off depending on rotor, automatic aeration, therefore samples are prevented from spitting.
- Magnetic drive system with speed control: centrifugal force eliminates bumping and foaming, no rotating parts outside the rotor chamber.
- Fast evaporation: high energy input through electrical heating of rotor chamber, can be set in 1°C intervals from room temperature to +60°C, large cross-section for optimized vapour transport to vacuum pump.
- Useful for water and solvent containing samples: basic SpeedDry system comes with durable glass cover, stainless steel rotor chamber, chemically resistant sealings, anodized rotors.
- Broadest range of rotors, large sample capacities.

Equipped with vacuum hose DN16, connection cable to vacuum pump and one rotor for 24 tubes 1.5/2.2ml - further rotors available as accessories, see list below.
Required for operation: chemically resistant diaphragm pump (final vacuum <10mbar, suction capacity approx. 2m³/h) and connecting pieces DN16. (e.g. type MZ 2C, manufacturer VACUUBRAND).

Type	PK	Cat. No.
RVC 2-18 Package	1	**9.883 154**
Membrane pump MZ 2C NT, two-step certification, 200-230 V/50-60 Hz, 100-115V/ 50-60Hz, 120 V/ 60Hz	1	**9.880 927**

E & OE.

Rotors for RVC 2-18 CDplus

Christ

Description	PK	Cat. No.
Aluminium angle rotor 40 x 0.25/0.5ml	1	**9.883 161**
Aluminium angle rotor 30 x 0.5/0.75ml	1	**9.883 162**
Aluminium angle rotor 24 x 1.5/2.2ml	1	**6.203 603** 1
Aluminium angle rotor 18 x 4/7ml	1	**6.203 604**
Aluminium angle rotor 12 x 10/15ml	1	**9.883 163**
Aluminium angle rotor 6 x 50ml	1	**9.883 164**
Aluminium angle rotor 6 x 50ml (FALCON)	1	**9.883 165**
Distance ring, aluminium black anodized, 20mm high	1	**6.252 163**

1

6.203 603

2 Rotational-Vacuum-Concentrator SpeedDry 2-25 CDplus Package

Christ

The Midi-Concentrator from Christ: all-purpose table-top system for routine concentration works of larger sample volumes. Suitable for typical solvents: e.g. acetonitrile, acetone, chloroform, dioxane, methylenchloride, ethanol, hexane, methanol, TFA, water.

- Simple operation with the push of a button: interface CDplus, automatic sequence for start and stop, vacuum on and off depending on rotor, automatic aeration, therefore samples are prevented from spitting.
- Magnetic drive system with speed control: centrifugal force eliminates bumping and foaming, no rotating parts outside the rotor chamber.
- Vacuum measurement and control.
- Ramp programming function for vacuum and temperature.
- Fast evaporation: high energy input through electrical heating of rotor chamber, cam be set in 1°C intervals from room temperature to +80°C, large cross-section for optimized vapour transport to vacuum pump.
- Useful for water and solvent containing samples: basic SpeedDry system comes with durable glass cover, stainless steel rotor chamber, chemically resistant sealings, anodized rotors.
- Broadest range of rotors, large sample capacities.
- Cold trap for improved, faster evaporation results and solvent recovery.

2

Equipped with cold trap (volume 2 litres, temperature -50°C), solvent-resistant glass lid with vacuum hose DN16 and one rotor for 24 tubes 10/15 ml, further rotors available as accessories, see list below.

Required for operation: chemically resistant diaphragm pump (final vacuum <10 mbar, suction capacity approx. 2 m³/h) and connecting pieces DN16. (e.g. type MZ 2C, manufacturer VACUUBRAND).

Type	PK	Cat. No.
RVC 2-25 CDplus Package	1	**9.883 155**
Chemistry vaccum system MZ 2C NT AK+EK with KF DN 16, Certification, 200-230 V/50-60 Hz, 100-115 V/50-60 Hz, 120V/60 Hz	1	**9.880 928**

Rotors for RVC 2-25 CDplus

NEW!

Christ

Description	PK	Cat. No.
Aluminium angle rotor 54 x 0.5/0.75ml	1	**9.883 169**
Aluminium angle rotor 36 x 1.5/2.2ml	1	**7.510 456** 3
Aluminium angle rotor 48 x 5/7ml	1	**9.883 170**
Aluminium angle rotor 36 x 8/10ml	1	**9.883 171**
Aluminium angle rotor 24 x 10/15ml	1	**9.883 168**
Aluminium angle rotor 12 x 30ml	1	**9.883 172**
Aluminium angle rotor 8 x 50ml (FALCON)	1	**9.883 173**
Aluminium angle rotor 8 x 50ml	1	**9.883 174**
Aluminium angle rotor 6 x 100ml	1	**9.883 175**
Aluminium swing-out rotor 2 x microtiter plate	1	**7.510 455**
Aluminium swing-out rotor 2 x deepwell plate	1	**9.883 176**
Distance ring, aluminium black anodized, 20mm high	1	**6.252 163**

3

7.510 456

BRAND*plates*® - A complete premium-quality line - for every application!

Microplates for Immunoassays (non-sterile)
Diagnosis of disease, pregnancy or verification of doping substances - many analyses in the modern laboratory are performed with immunological assays in microplates. They are characterized by their high specificity and provide the opportunity to detect the lowest concentrations of defined substances in complex liquids e.g. blood serum.
immunoGrade™ (high binding)
Optimized for the immobilization of IgG, highest binding capacity for molecules with mixed hydrophilic and hydrophobic regions. The surface of choice for the majority of standard ELISAs.
hydroGrade™
Strongly hydrophilic, high affinity to hydrophilic molecules like e.g., glycoproteins and peptides, antibodies with predominantly hydrophilic regions and nucleic acids.
lipoGrade™
Strongly hydrophobic (lipophilic), immobilization of biomolecules with predominantly hydrophobic regions. An alternative to the immunoGrade™ surface for the immobilization of molecules, e.g. lipoproteins or peptides.

Non-treated (sterile or non-sterile)
Non-treated PS microplates are used in the most diversified application fields, e.g. homogenous standard assays and extensive screening assays. The hydrophobic characteristics of untreated PS are often of use in performing theses applications! The new BRAND*plates*® range contains two types of non-treated microplates:
pureGrade™ (medium binding)
Non-treated, non-sterile surface. The standard plate for most applications. Particularly applicable for homogenous assays, screening, and in the field of storage.
pureGrade™ S
Non-treated surface, sterile. Sterilized via ß-radiation. Especially suited for bacteriological assays.

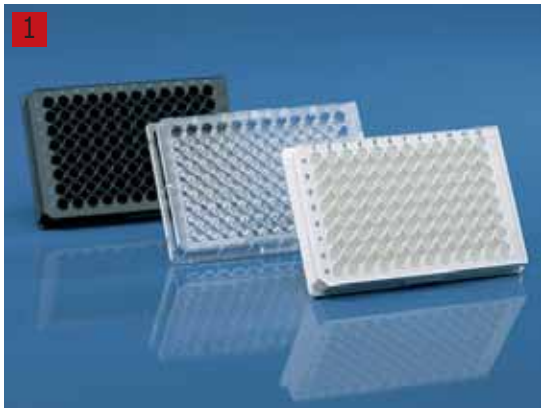
Colours, wells and shapes:
- 96- and 384-well format
- standard or transparent bottom
- transparent, white or black
- Various well bottom shapes: U-, V-, F-, C-bottom for 96-well format
- clearly distinguishable via color code: blue embossed alphanumeric coding for 96-well standard plates.
- free from endotoxins (< 0.01 EU/ml), DNase, DNA, RNase, non-cytotoxic (according to ISO 10993)
- ANSI/SLAS format
- **non-sterile products without lid, please order separately**
- **sterile products comply with ISO 11137 and AAMI guidelines. A SAL of 10^{-6} is reached. Supplied individually wrapped with lid.**

Get yourself familiar with the new range by using the BRAND*plates*® selection guide under www.brand.de.

1 ImmunoGrade™ (high binding)

PS, non-sterile. Optimized for the immobilization of IgG, standard ELISA assay. *BRAND*

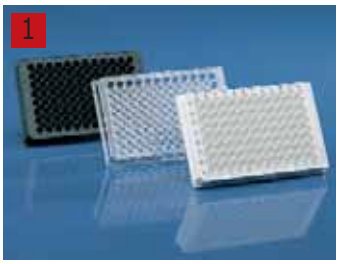
Description	Bottom shape/ Well volume µl	PK	Cat. No.
96-well, transparent	U / 330	100	**4.000 275**
96-well, transparent	V / 360	100	**4.000 276**
96-well, transparent	F / 350	100	**4.000 277**
96-well, transparent	C / 350	100	**4.000 278**
96-well, white	U / 330	100	**4.000 279**
96-well, white	C / 350	100	**4.000 280**
96-well, black	U / 330	100	**4.000 281**
96-well, black	C / 350	100	**7.635 711**
96-well, black / transparent	F / 330	100	**4.000 282**
384-well, transparent	F / 100	50	**4.000 283**
384-well, white	F / 100	50	**4.000 284**
384-well, black	F / 100	50	**4.000 285**



E & OE.

1 hydroGrade™

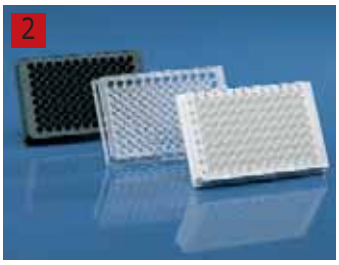
PS, non-sterile. Hydrophilic. For solid phase with hydrophilic molecules and liquid phase with hydrophobic molecules, resp. *BRAND*



Description	Bottom shape/ Well volume µl	PK	Cat. No.
96-well, transparent	U / 330	100	**4.000 286**
96-well, transparent	F / 350	100	**4.000 287**
96-well, transparent	C / 350	100	**4.000 288**
96-well, white	U / 330	100	**4.000 289**
96-well, white	C / 350	100	**4.000 290**
96-well, black	U / 330	100	**4.000 291**
96-well, black	C / 350	100	**4.000 292**
384-well, transparent	F / 100	50	**4.000 293**
384-well, white	F / 100	50	**4.000 294**
384-well, black	F / 100	50	**4.000 295**

2 lipoGrade™

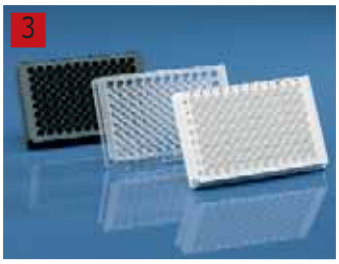
PS, non-sterile. Lipophilic/hydrophobic. For solid phase with hydrophobic molecules and liquid phase with hydrophilic molecules, respectively. *BRAND*



Description	Bottom shape/ Well volume µl	PK	Cat. No.
96-well, transparent	U / 330	100	**4.000 296**
96-well, transparent	V / 360	100	**4.000 297**
96-well, transparent	F / 350	100	**4.000 298**
96-well, transparent	C / 350	100	**4.000 299**
96-well, white	U / 330	100	**4.000 300**
96-well, white	C / 350	100	**4.000 301**
96-well, black	U / 330	100	**4.000 302**
96-well, black	C / 350	100	**4.000 303**
96-well, white / transparent	F / 330	100	**4.000 304**
96-well, black / transparent	F / 330	100	**4.000 305**
384-well, transparent	F / 100	50	**4.000 306**
384-well, white	F / 100	50	**4.000 307**
384-well, black	F / 100	50	**4.000 308**
384-well, hite / transparent	F / 120	50	**4.000 312**
384-well, black / transparent	F / 120	50	**4.000 313**

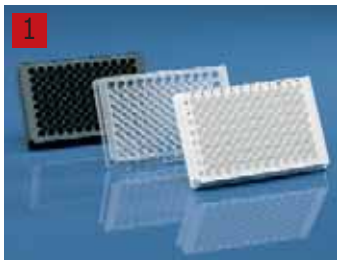
3 pureGrade™ (medium binding)

PS. Non-treated, non-sterile.
For homogenous assays, screenings, storage, etc. *BRAND*



Description	Bottom shape/ Well volume µl	PK	Cat. No.
96-well, transparent	U / 330	100	**4.000 238**
96-well, transparent	V / 360	100	**6.233 851**
96-well, transparent	F / 350	100	**6.231 785**
96-well, transparent	C / 350	100	**4.000 239**
96-well, white	U / 330	100	**4.000 240**
96-well, white	F / 350	100	**6.233 548**
96-well, black	U / 330	100	**4.000 241**
96-well, black	F / 350	100	**6.233 756**
96-well, white / transparent	F / 330	100	**4.000 242**
96-well, black / transparent	F / 330	100	**4.000 243**
96-well, UV-transparent*	F / 350	50	**9.408 976**
384-well, transparent	F / 100	50	**4.000 244**
384-well, white	F / 100	50	**4.000 245**
384-well, black	F / 100	50	**4.000 246**
384-well, white / transparent	F / 120	50	**4.000 250**
384-well, black / transparent	F / 120	50	**4.000 251**
1536-well, transparent	F / 10	50	**4.000 253**
1536-well, white	F / 10	50	**4.000 254**
1536-well, black	F / 10	50	**4.000 255**

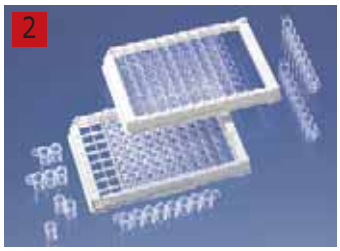
*slightly hydrophilized, not available in USA and Japan



1 pureGrade™ S

PS. Non-treated, sterile. *BRAND*
For bacteriological assays, screenings, storage, etc.

Description	Bottom shape/ Well volume µl	PK	Cat. No.
96-well, transparent	U / 330	50	**4.000 256**
96-well, transparent	V / 360	50	**4.000 257**
96-well, transparent	F / 350	50	**6.233 912**
96-well, transparent	C / 350	50	**4.000 258**
96-well, white	F / 350	50	**4.000 259**
96-well, black	F / 350	50	**4.000 260**
96-well, white / transparent	F / 330	50	**4.000 261**
96-well, black / transparent	F / 330	50	**4.000 262**
384-well, transparent	F / 100	50	**4.000 263**
384-well, white	F / 100	50	**4.000 264**
384-well, black	F / 100	50	**4.000 265**
384-well, white / tranpsarent	F / 120	50	**4.000 269**
384-well, black / transparent	F / 120	50	**4.000 270**
1536-well, transparent	F / 10	50	**4.000 272**
1536-well, white	F / 10	50	**4.000 273**
1536-well, black	F / 10	50	**4.000 274**



2 Strip plates 12xF8 BRAND*plates*®

BRAND*plates*® microplates have ideal optical characteristics and are manufactured according to ANSI and SBS standards. They are available as 96-well standard plates as well as strip plates with immunoGrade™ and pureGrade™ surfaces - for greater flexibility and optimal results. *BRAND*

immunoGrade™ high binding capacity (highbinding), ideal for IgG and molecules with hydrophobic and hydrophilic regions

pureGrade™ medium binding capacity (medium-binding), somewhat more hydrophobic than immunoGrade™

These offer high flexibility. Use only as many wells as necessary. Two variants are available:

Strip plates without grid: for processing 12 strips of 8 wells each. Individual strip can be removed from the frame and reinserted. The strips are not divisible.

Strip plates with grid: likewise for 12 strips of 8 wells each. Individual strips are removable from the plate and can be reinserted. The strips can be divided into 8 individual vessels and can be inserted individually into the frame plate.

Capacity µl	Type	Description	PK	Cat. No.
360	pureGrade™	without grid, not splittable	100	**4.007 910**
350	pureGrade™	with grid, splittable	100	**4.007 911**
360	immunoGrade™	without grid, not splittable	100	**4.007 912**
350	immunoGrade™	with grid, splittable	100	**4.007 913**

3 Lids for BRAND*plates*® microplates

To protect samples, reaction batches or cell cultures from both contamination and evaporation, compatible lids are available for all BRAND*plates*® microplates. The lids are made of crystal-clear polystyrene. They are optimally matched to the corresponding BRAND*plates*® microplates, so that plates with lids can also be stacked. The cut-corner sets the orientation of the lid. For 96-well standard plates, lids with condensation rings are also available. *BRAND*

Description	Height mm	PK	Cat. No.
for 96-well standard plates with condensation rings	8.0	100	**4.000 363**
for 96-well standard plates	8.0	100	**4.000 364**
for 96-well plates with transp. bottom and for 384-well plates	4.5	50	**4.000 365**
for 1536-well plates	5.5	50	**4.000 366**

E & OE.

1 C96 MicroWell™ Plates, PS

Thermo Scientific

- C-shaped bottom for optimal washing and liquid retrieval
- FluoroNunc™ for fluorescence based immuno assays with minimal auto-fluorescence
- MaxiSorp™ and PolySorp™ for quantitative and qualitative solid phase immuno assays
- Working volume range: 50 - 250µl/ well

Surface	Colour	Sterile	Description	PK	Cat. No.
MaxiSorp™	White	no*	without lid	60	**6.079 678**
MaxiSorp™	Clear	no*	without lid	60	**9.390 553**
MaxiSorp™	Clear	no*	without lid	60	**9.390 554**
PolySorp™	Clear	no	without lid	60	**9.390 557**

* certified.

2 F96 Immuno™ Plates, PS

Thermo Scientific

Clear, white or black plates with excellent optical clarity and flat bottom wells. MaxiSorp™, MediSorp™, MultiSorp™ und PolySorp™ are optimal for solid phase immuno assays.
Material plates: Polystyrene
Total volume µl/well: 400

Surface	Colour	Sterile	Description	PK	Cat. No.
Non-treated	Clear	no	without lid	180	**6.222 441**
Non-treated	White	no	without lid	180	**6.201 514**
Non-treated	Black	no	without lid	180	**6.228 233**
MediSorp™	Clear	no	without lid	60	**4.008 649**
MultiSorp™	Clear	no	without lid	60	**4.008 650**
MaxiSorp™ *	Clear	no	without lid	60	**9.390 550**
MaxiSorp™	Clear	no	without lid	60	**9.390 551**
PolySorp™	Clear	no	without lid	60	**9.390 555**
Non-treated	Clear	no	without lid	180	**4.008 780**
PolySorp™	Clear	no	without lid	180	**4.008 802**
MaxiSorp™ *	Clear	no	without lid	180	**4.009 010**
MaxiSorp™ *	Clear	no	without lid	180	**6.301 671**
Non-treated	Clear	no	with lid	160	**7.603 959**
Non-treated	Clear	no	without lid	60	**9.390 514**

* certified.

3 V96 MicroWell™ Plates, PS

Thermo Scientific

Clear plates with V-shaped well bottom for maximized sample recovery. The wells have raised rims and lids are supplied with rings, which prevent cross contamination.
Applications include: antibiotic screens, serological tests, storing and screening compounds and DNA libraries.
Material plates: Polystyrene
Total volume µl/well: 300

Surface	Colour	Sterile	Description	PK	Cat. No.
Non-treated	Clear	yes	with cap	50	**4.008 606**
Non-treated	Clear	yes	without cap	50	**9.390 513**
Non-treated	Clear	no	without cap	180	**9.390 512**

4 U96 MicroWell™/Immuno™ Plates, PS

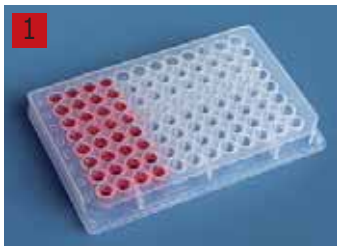
NEW!

Thermo Scientific

Clear plates with excellent optical quality and round well bottom. Nunclon™Δ surface optimized for cell based assays and sterile non-treated versions for bacteriological applications. MaxiSorp™ und PolySorp™ suitable for solid phase immuno assays.
Material plates: Polystyrene
Total volume µl/well: 300

Surface	Colour	Sterile	Description	PK	Cat. No.
Nunclon™Δ	Clear	yes*	with lid	50	**9.407 471**
Non-treated	Clear	yes	without lid	50	**9.390 511**
Non-treated	Clear	yes	with lid	160	**4.009 009**
Non-treated	Clear	nein	without lid	180	**9.390 510**
MaxiSorp™	Clear	nein	without lid	60	**9.390 552**
PolySorp™	Clear	nein	without lid	60	**9.390 556**
HydroCell™	Clear	yes	with lid	8	**4.008 713**
Cell culture	Clear	yes	with lid	160	**4.008 768**

* certified.



1 Microtitration plates and sealing films

NEW!

Compatible with most microtitration plate centrifuges. *BRAND*

- For volumes up to 330µl
- U-bottom wells
- Autoclavable at 121°C (2 bar), according to DIN EN 285.
- High chemical resistance (e.g. phenol, chloroform, DMSO).
- Recessed hollows between the wells minimize contamination.
- Raised rings (rims) around the orifice of each well for easy sealing using self-adhesive sealing films.
- Plates can be sealed with self-adhesive, alphanumerically coded, DMSO-resistant, sealing film (cross-cut).

Type	PK	Cat. No.
Microtitration plate, PP, U-Bottom, 330µl	100	**9.408 970**
DMSO-resistant sealing film, PP	100	**9.408 983**
Sealing film, self-adhesive, PP	100	**9.409 386**
Sealing film, self-adhesive, Al	100	**9.409 387**

2 Lids for 96-well and 384-well Plates

Lids in various versions made of clear, strong polystyrene with notches for quick orientation. Reduce water loss due to lower evaporation. 96-well lids feature individual condensation rings. *Thermo Scientific*

Height mm	With	Sterile	PK	Cat. No.
7.90	Evaporation barrier	no	100	**9.407 480**
7.90	Evaporation barrier	yes	50	**9.407 481**
7.90	Evaporation barrier	yes	60	**6.802 229**
8.34	-	yes	60	**4.008 599**
8.34	-	no	60	**6.206 034**

Evaporation barrier is a rim around the inside edge of the lid.

3 Sealing Tapes for MultiWell Plates

Effectively seals all microplate formats for storage, PCR, microscopy, culture and protection. Pre-cut, plate-sized sheets. *Thermo Scientific*

Type 1) General use, PCR, storage, photo-sensitive samples
Type 2) Cell Culture, sterile applications
Type 3) Microscopy, good optics, low auto-fluorescence, DMSO compatible
Type 4) Breathable, cell culture

Type	Material	Glue	Sterile	Colour	PK	Cat. No.
1)	Aluminium	Silicone	no	Silver	100	**6.250 417**
2)	Polyester	Acrylic	yes	Clear	800	**9.407 482**
3)	Polyolefin	Acrylate	no	Clear	100	**6.223 248**
4)	Rayon	Acrylate	yes	White	50	**4.008 574**

4 Immuno™ Washers

- Easy-to-use
- Allow for a flexible washing procedure
- Uniform and efficient washing
- Rack included (not autoclavable)
- Adjustable to all well shapes
- Autoclavable at 121°C
- for tubing with 6mm bore

Thermo Scientific

Description	PK	Cat. No.
Nunc-Immuno™ Wash 8, 8-Channel	1	**6.302 667**
Nunc-Immuno™ Wash 12, 12-Channel	1	**6.700 069**

E & OE.

1 Manual Microplate washer Type 200

Mikura

The 200 Series Washer - very user-friendly manual washer.
- quiet and reliable operation in a compact modular format.
- accurate dispensing and low residual volumes.
- adjustable dispense pressure.
- filtered pump inlet and silenced outlet.
- fully autoclavable, metal free fluid path.
- colour coding for easy maintenance and system modularity.
- 8 or 12 way wash heads, optional aspirate probes and fill manifolds.
- optional head designs for paper disc washing.
- 12V d.c. remote power supply for piece of mind and added safety.

Technical specifications

Operating voltage/Hz:	100-240V 50/60Hz a.c.
Max current requirement:	12VA
Dispense reservoir:	2 litre bottle
Waste reservoir:	2 litre bottle
Weight of pump unit:	3.0kg
Weight of complete system:	4.8kg
Dimensions, WxDxH: (with reservoirs)	250 x 300 x 250mm

Type	PK	Cat. No.
8 Channel Washer complete	1	**4.006 931**
12 Channel Washer complete	1	**4.006 932**

2 Microplate Washer, Autura 1000

Mikura

Autura 1000 is a unique processor for the fully automated washing and filling of both, 96 and 384 well microplates, including deep well formats.
- Accurate dispensing precision and low residual volumes.
- Optional aerosol protection cover.
- Unique open construction for easy integration with robotic systems.
- Up to 25 user programmable wash protocols.
- Liquid level sensing in all reservoirs with audible and visual warning system.
- Extremely easy to clean and maintain.
- Autura accommodates all variants of 96 and 384 well microplates.
- Optional automatic rinse through wash head at set intervals.
- Internal RS232 port ensures Autura's robotic integration.
- USB port for remote computer interface.
- Remote control software available on request.

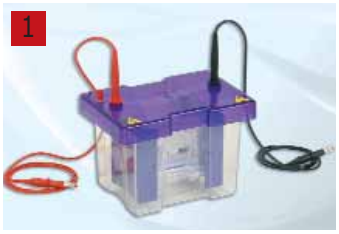
Additional features:
- Easy exchange of wash heads.
- Heads availability in 8, 12, 16 and 24 concentric tip configurations.
- Easy to read back illuminated full alpha numeric display.
- Autura operates on 12V DC, supplied via an external switch mode power supply, thus enhancing operational safety.
- Separate dispense and aspirate channels reduce the possibility of cross contamination.
- Compact design.

Specification

Operating voltage/Hz:	100-240V AC 50/60Hz
Max. Current requirement:	52VA
Dispense reservoir:	Up to 2 x 2L
Waste reservoir:	2L
Residual volume:	3µl per well typical action or 1µl per well with sweep
Precision:	CV = ±3% 300µl
Dispensing volume:	25µl to 1500µl in 25µl increments
Speed:	2.5mins*
Weight of complete system:	6.2kg
Dimensions of complete system (WxDxH):	230mm x 480mm x 320mm

Type	PK	Cat. No.
8 channel washer (96 well plates)	1	**4.006 927**
12 channel washer (96 well plates)	1	**4.006 928**
16 channel washer (96 well plates)	1	**9.951 950**
24 channel washer (96 well plates)	1	**9.951 951**
16 channel washer (384 well plates)	1	**9.951 952**
24 channel washer (384 well plates)	1	**9.951 953**

* to complete a 3 wash cycle using a double row 12 port head, 350µl/well, 96-well plate



1 Gel electrophoresis tank omniPAGE Mini

Cleaver Scientific

The preferred unit for routine mini protein electrophoresis, the omniPAGE mini is constructed using the latest injection moulding manufacturing techniques. This gives a high quality, low cost product with unsurpassed finish, durability and strength. The unit incorporates a sealing system which is compatible with all major types of 8 x 10cm and 10 x 10cm precast gel. Gel casting and running utilise the same insert, no transfer of glass plates during gel casting is necessary. The insert contains the option of sliding clamps or just one screw per clamping bar side allowing very rapid set up of both hand cast and precast gels. Ultra soft silicone seals and pressure bars which surround the glass plates guarantee leak proof gel casting. 2mm thick glass plates prevent breakage and have bonded spacers for convenience. Accessory electro blotting and tube gel modules are available which use the same outer tank and lid.

Supplied with:
CVS10D: omniPAGE Mini, 10 x 10cm Dual, 2 sets of Glass Plates, electrodes, 1mm thick bonded Spacers, 2 x 12 sample, 1mm thick combs. CLAMP VERSION.
CVS10DSYS: as CVS10D additionally with caster

Technical specifications

Gel dimensions (W x L):	7.5 x 8cm
Unit dimensions (WxDxH):	19 x 13 x 15cm
Max. sample capacity:	80 samples, 20 samples per gel
Buffer volume:	min. 250ml; max 1200ml

Type	Description	Sample volume µl	PK	Cat. No.
CVS10D	omniPage Mini		1	**9.584 652**
CVS10CBS	Complete system for Mini Vertical 10 x 10cm		1	**6.229 038**
CVS10DSYS	omniPage Mini incl. caster		1	**9.584 654**
VS10NG	Notched Glass Plates 2mm		2	**6.229 282**
VS10PGS0.75	Plain Glass Plates with 0.75mm Bonded Spacers		2	**9.584 730**
VS10PGS1	Plain Glass Plates with 1mm Bonded Spacers		2	**6.230 607**
VS10PGS1.5	Plain Glass Plates with 1.5mm Bonded Spacers		2	**9.584 731**
VS10-12-0.75	Comb 12 sample, 0.75mm	25	1	**9.584 732**
VS10-16MC-0.75*	Comb 16 sample MC, 0.75mm	20	1	**9.584 733**
VS10-8MC-1*	Comb 8 sample MC, 1mm	60	1	**6.232 797**
VS10-10-1	Comb 10 sample, 1mm	40	1	**6.232 290**
VS10-12-1	Comb 12 sample, 1mm	35	1	**6.232 176**
VS10-16MC-1*	Comb 16 sample MC, 1mm	25	1	**6.229 039**
VS10-20-1	Comb 20 sample, 1mm	20	1	**6.232 291**
VS10-12-1.5	Comb 12 sample, 1.5mm	50	1	**9.584 734**
VS10-16MC-1.5*	Comb 16 sample MC, 1.5mm	40	1	**9.584 735**

* Multichannel compatible.

2 Gel electrophoresis package omniPAGE TETRAD Mini-Set

The gel electrophoresis tank OmniPAGE Mini is suitable for parallel treatment of up to 4 gels with 20 samples each. The tank is easy to handle, especially leak proof and guarantees an efficient cooling. For self-cast gels and all major types of 8 x 10cm and 10 x 10cm precast gels.
Supplied with:
- omniPAGE Mini, 10 x 10cm Dual
- 1x CVS10DIRM Sliding Clamp PAGE insert
- 1x CVS10EXCASTER External Casting Upstand
- 1x VS10TANK Tank
- 1x VS10LID Lid
- 1x VS10DP Dummy plate
- 1x CSL-CAB set of electrophoresis cables, one black, one red
- 2x VS10PGS1 Plain glass plates with 1mm bonded spacer (pack of 2)
- 2x VS10NG Notched glass plates (pack of 2)
- 2x VS10NGS1 Notched glass plates with 1mm bonded spacer (pack of 2)
- 4x VS10-12-1 = 4x 12 sample combs, 1mm thick
- 1x VS10DCAST Casting base with casting mat

Type	PK	Cat. No.
omniPAGE TETRAD Mini-Set	1	**7.930 246**

E & OE.

1 Gel electrophoresis tank VS20 Wave Maxi

NEW!

Cleaver Scientific

The new VS20 WAVE Maxi System is Cleaver Scientific's latest product innovation for large-format vertical gel electrophoresis. Designed to perform a variety of separations, including first- and second-dimension SDS-PAGE, native, preparative, gradient and high-resolution nucleic acid electrophoresis, plus capillary tube gel IEF and electroblotting, the VS20 WAVE is one of the most versatile maxi vertical systems available.
By introducing innovative, new vertical screw-clamp technology only four screws are now necessary to secure as many 20x20cm gels. This gives the VS20 WAVE Maxi the selective advantage of a much faster set up speed compared to competitor products whose traditional clamping configurations require as many as 24 screws to secure just two glass plates. In addition, the WAVE's vertical screw-clamp configuration distributes pressure evenly along the height of the gel rather than in the centre to eliminate plate bowing and gel compression, but still maintains a leak-proof seal during casting; while the ergonomic wave-like design aids both handling and set up.
Whatever your requirements are the WAVE can be made to meet them. Regardless of whether it is running 2 or 4 gels, electroblotting, and IEF using capillary tube gels or IPG strips, all of these techniques may be performed using the same omni-purpose unit while retaining the benefits of large format electrophoresis, such as extended separation distances, greater sample throughput and superior resolution.

VS20WAVESYS incl. VS20 WAVE Maxi, Glass plates, 2 x 24 well combs, cooling coil, casting base
VS20WAVESYS-CU incl. VS20 WAVE Maxi, 20 x 20cm Dual, 2 sets of Glass Plates, 1mm thick bonded spacers, 2 x 24 sample, 1mm thick combs, cooling coil, dummy plate, caster, external casting upstand
VS20CBS incl. WAVE Maxi Vertical Unit, 2 x 4mm thick notched glass plates, 2 x 4mm thick plain glass plates with 1mm thick bonded spacers, 1 x dummy plate, 2 x combs (1mm thick 24 samples), 1 x casting base, silicone mat, cooling pack;
plus: 1x WAVE Standard Electroblotting Module which includes: WAVE Maxi Platinum Wire Blotting Insert, 4 x compression cassettes and 18x fibre pads

1

Specifications

Gel dimensions (W x L):	20 x 20cm
Gel dimensions (W x L) VS20CBS:	17.5 x 18cm
Unit dimensions (WxDxH):	30 x 18 x 27cm
Max. sample capacity:	2 x 24 samples
Buffer volume:	min. 4.8l (4 gels), max. 5.3l (2 gels)
Buffer volume VS20CBS:	min. 5.3l, max. 6.4l

Type	Description	Sample volume µl	PK	Cat. No.
VS20WAVESYS			1	**9.584 795**
VS20WAVESYS-CU			1	**9.584 796**
VS20CBS			1	**9.584 750**
VS20NG	20 x 20cm Notched Glass Plates 4mm thick		2	**6.232 288**
VS20PGS1	20 x 20cm Plain Glass Plates with 1mm Bonded Spacers		2	**6.232 289**
VS20PGS1.5	20 x 20cm Plain Glass Plates with 1.5mm Bonded Spacers		2	**9.584 737**
VS20-18MC-1*	Comb 18 sample MC, 1mm	50	1	**6.232 630**
VS20-24-1	Comb 24 sample, 1mm	40	1	**9.584 738**
VS20-36MC-1*	Comb 36 sample MC, 1mm	25	1	**9.584 739**
VS20-48-1	Comb 48 sample, 1mm	20	1	**9.584 740**
VS20-18MC-1.5*	Comb 18 sample MC, 1.5mm	80	1	**9.584 741**
VS20-24-1.5	Comb 24 sample, 1.5mm	60	1	**9.584 742**

Power supplies for gel electrophoresis tanks

- microprocessor controlled
- constant voltage or current

Supply requirements	Description	Rating W	PK	Cat. No.
300 V / 700 mA	no programs, 4 outputs, LED display, stackable	150	1	**4.006 960**
300 V / 3000 mA	30 programs, 4 outputs, LCD display, stackable	300	1	**4.006 961** 2
500 V / 600 mA	10 programs, 4 outputs, LED display, stackable	300	1	**4.006 962**

2

4.006 961

1

9.584 753

Semi Dry Blotters

Cleaver Scientific

These Semi Dry Blotters offer rapid transfer times for DNA, RNA and protein blotting; typically 15 to 30 minutes. All units can be used for all types of blotting: western, southern and northern via uncomplicated buffer and set up procedures and are compatible with gel thicknesses from 0.25 up to 10mm without the need for additional equipment. Each unit is compatible with their respective omniPAGE vertical gel system. Semi Dry Blotting has the added benefit of economic transfers due to very low buffer volumes - typically only a few millilitres of buffer are required per transfer. These Semi-Dry Blotters utilise a screw down lid, which secures the blot sandwich and allows complete control of pressure ensuring even transfer. The electrodes, comprising platinum coated anode and stainless steel cathode, will exhibit practically no corrosion and so provide many years of trouble free use. Uniform heat dispersion across the blot sandwich ensures stable transfer times and no heat induced sample loss or transfer distortions. Being translucent, it allows viewing of the blot sandwich to ensure correct positioning and transfer is occurring correctly. Electrode plates are fully separated to prevent arching or damage.

Type	Description	Dimensions (W x D x H) mm	Capacity Buffer ml	Qty. Blots	Dimensions blots cm	PK	Cat. No.
SD10	Semi Dry Mini, 10 x 10cm System	160 x 160 x 70	5	1	8 x 8,5	1	**9.584 753** 1
SD20	Semi Dry Maxi, 20 x 20cm System	260 x 260 x 70	20	1 2 4	16 x 17,5 16 x 8,5 8 x 8,5	1	**6.229 381**
SD33	Semi Dry Maxi Plus, 33 x 45cm System	33 x 45 x 70	75	1 2 5 10 20	33 x 45 26 x 20 16 x 17,5 16 x 8,5 8 x 8,5	1	**6.239 745**
SD50	Semi Dry Maxi Blotter 20 x 50cm System	26 x 56 x 70	50	1 2 2 6 13	20 x 50 16 x 17,5 26 x 20 16 x 8,5 8 x 8,5	1	**9.584 754**

2

2 LLG-Transfer membrane, PVDF

NEW!

Hydrophobic Polyvinylidene Fluoride (PVDF) transfer membrane with high binding capacity and low background. Ideal for use in protein binding applications such as Western blots, solid phase assays and immunoblotting procedures. BSA binding capacity of 125 mg/cm2

Length mm	Width mm	Pore size µm	PK	Cat. No.
3000	300	0.45	1	**6.268 166**
3000	300	0.22	1	**6.268 167**
200	200	0.45	25	**6.268 168**
200	200	0.45	5	**6.268 169**
200	200	0.22	5	**6.268 170**

3

3 LLG-Transfer membrane, supported nitrocellulose

NEW!

Supported Nitrocellulose transfer membranes combine the binding characteristics of nitrocellulose membranes with the strength of nylon membranes. These membranes are used for DNA/RNA transfers requiring low background or for multiple hybridizations. For use with chemiluminescence and radiographic detection systems. BSA binding capacity up to 100µg/cm².

Length mm	Width mm	Pore size µm	PK	Cat. No.
3000	300	0.45	1	**6.268 171**
3000	300	0.22	1	**6.268 172**
200	200	0.45	25	**6.268 173**
200	200	0.45	5	**6.268 174**
200	200	0.22	5	**6.268 175**

4

4 LLG-Transfer membrane, nitrocellulose

NEW!

Pure Nitrocellulose transfer membrane for all protein or immunoblotting applications. The high sensitivity and low background ensures excellent results in all transfers. Compatible with all detection systems. BSA binding capacity up to 100µg/cm².

Length mm	Width mm	Pore size µm	PK	Cat. No.
3000	300	0.45	1	**6.268 161**
200	200	0.45	25	**6.268 162**
200	200	0.22	25	**6.268 163**
200	200	0.45	5	**6.268 164**
200	200	0.22	5	**6.268 165**

E & OE.

1 Transfer membranes Nytran® N

Neutral nylon membranes. *GE Healthcare*
For DNA/RNA transfers. Very low background. For chemiluminescence detection and multiple hybridisations.

Dimensions mm	Pore size µm	PK	Cat. No.
200 x 200	0.20	10	**9.057 105**
300 x 3 m	0.20	1	**9.057 107**
200 x 3m reel	0.45	1	**9.057 116**
300 x 3m reel	0.45	1	**9.057 117**

2 Membrane Tweezers

NEW!

Swiss made. Made of austenitic steel. Non-magnetizable. Good corrosion resistance to most chemicals, salts and acids. Flat, with round tips and rounded edges. Especially suitable for safe handling of transfer membranes. *Ideal-tek*

Length mm	Form	PK	Cat. No.
115	flat, round tip	1	**9.160 131**

3 Storage boxes, PE-HD with tightly closing PE-LD lid

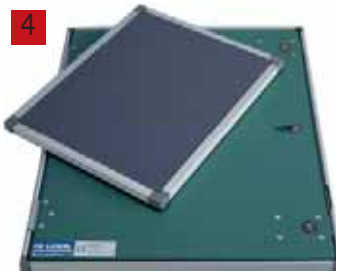
PE-HD. With tightly closing PE-LD lid. Suitable for cold storage rooms and refrigerators. Temperature range/withstands temperatures (without mechanical stress) from -20 to +95°C. Stackable. Acid and chemical resistant. Food safe. Colour: natural.

Capacity L	Width mm	Length mm	Height mm	PK	Cat. No.
0.50	103	103	64	1	**9.033 270**
1.00	103	103	127	1	**9.033 275**
1.00	103	208	64	1	**9.033 280**
1.50	103	208	94	1	**9.033 285**
2.00	103	255	94	1	**9.033 286**
2.00	208	208	64	1	**9.033 287**
3.20	208	208	94	1	**9.033 288**

4 X-Ray cassettes

Standard design with lead lining and snap fit lid.
- easy to open, easy to close with gentle pressure.
- firm, consistent support for films through special shaping:
  base pre-formed with convex profile.
- flexible, pure aluminium base (Absorption 1.2mm A\leq value)
  flim processed in frames:
- Aluminium base coated in impact-resistant paint
- Anodised aluminium frame
- Elastic foam for film protection
- Specifically designed for audioradiography at 70°C

Use our reinforcement films in the blue sensitivity range with these X-Ray cassettes.



Format mm	PK	Cat. No.
180 x 240	1	**9.106 580**
240 x 300	1	**9.106 581**
200 x 400	1	**9.106 582**
356 x 432	1	**9.106 583**

Reinforcement films for X-Ray cassettes

Reinforcement films Universal B 1
$CaWo_4$, blue.

Format mm	PK	Cat. No.
180 x 240	2	**9.106 570**
240 x 300	2	**9.106 571**
200 x 400	2	**9.106 572**
356 x 432	2	**9.106 574**

1

1 Dialysis membrane tubing OrDial

NEW!

Orange Scientific

Orange Scientific OrDial dialysis membrane tubings are made of high quality Regenerated Cellulose. They are produced with the highest care and attention to quality and stability. Still, they are extremely cost effective. The membranes are supplied dry containing glycerol acting as a preservative. Thus, the membranes should be cleaned before use.

Each box includes:
- Two free of charge dialysis membrane clips.
- Technical manual.
- Analytical data sheet (except D14b range).
- In order to prevent any damage to the membranes during transport, the membranes are packed in a carton. This carton is packed in a seal bag containing a desiccant and the bag is packed in another thick carton box.

Type	MWCO	Width (flat)	Length	Diam. (dry)	Thickness	Vol./cm	PK	Cat. No.
	da	mm	m	mm	µm	ml		
OrDial D35	3500	25	15	16	20	2.02	1	**6.266 373**
OrDial D35	3500	25	30	16	20	2.02	1	**6.266 374**
OrDial D35	3500	44	15	28	20	6.16	1	**6.266 375**
OrDial D35	3500	44	30	28	20	6.16	1	**6.266 376**
OrDial D35	3500	55	15	35	25	9.63	1	**6.266 377**
OrDial D80	6000 - 8000	25	15	16	20	2.02	1	**6.266 378**
OrDial D80	6000 - 8000	25	30	16	20	2.02	1	**6.266 379**
OrDial D80	6000 - 8000	34	15	22	23	3.81	1	**6.266 380**
OrDial D80	6000 - 8000	34	30	22	23	3.81	1	**6.266 381**
OrDial D80	6000 - 8000	44	15	28	20	6.16	1	**6.266 382**
OrDial D80	6000 - 8000	44	30	28	20	6.16	1	**6.266 383**
OrDial D80	6000 - 8000	55	15	35	25	9.63	1	**6.266 384**
OrDial D80	6000 - 8000	55	30	35	25	9.63	1	**6.266 385**
OrDial D14	12000 -14000	10	15	6	51	0.29	1	**6.266 386**
OrDial D14	12000 -14000	10	30	6	51	0.29	1	**6.266 387**
OrDial D14	12000 -14000	25	15	16	20	2.02	1	**6.266 388**
OrDial D14	12000 -14000	25	30	16	20	2.02	1	**6.266 389**
OrDial D14	12000 -14000	34	15	22	23	3.81	1	**6.266 390**
OrDial D14	12000 -14000	34	30	22	23	3.81	1	**6.266 391**
OrDial D14	12000 -14000	44	15	28	20	6.16	1	**6.266 392**
OrDial D14	12000 -14000	44	30	28	20	6.16	1	**6.266 393**
OrDial D14b	12000 -14000	10	30	6	51	0.29	1	**6.266 394**
OrDial D14b	12000 -14000	25	30	16	27	2.02	1	**6.266 395**
OrDial D14b	12000 -14000	32	30	20	30	3.15	1	**6.266 396**
OrDial D14b	12000 -14000	40	30	25	30	4.91	1	**6.266 397**
OrDial D14b	12000 -14000	80	15	51	51	20.43	1	**6.266 398**

2

2 Centrifugal concentrators, Vivaspin 2

Sartorius

Membrane: polyethersulphone. This 2 ml volume unit combines the rapidity of the classic Vivaspin products with reduced internal surface and membrane areas for superior recoveries from very dilute solutions. With a choice of suitable membranes (PES, CTA, Hydrosart) Vivaspin 2 provides the highest flexibility for process optimisation. Vivaspin 2 guarantees maximum sample recovery either by reverse centrifuging into the concentrate recovery cap or by directly pipetting the concentrate from the deadstop pocket built into the bottom of the concentrator.

Membrane surface:	1.2cm²
Max. rcf.:	8000 x g
Hold-up volume:	< 10µl

MWCO	PK	Cat. No.
da		
3000	25	**9.049 861**
5000	25	**9.049 760**
10000	25	**9.049 761**
30000	25	**9.049 762**
50000	25	**9.049 763**
100000	25	**9.049 764**
3000	100	**9.049 862**
5000	100	**9.049 777**
10000	100	**9.049 778**
30000	100	**9.049 779**
50000	100	**9.049 780**
100000	100	**9.049 781**

E & OE.

1 Vivaspin 6

Sartorius

Membrane: polyethersulphone. Vivaspin 6ml concentrators have been developed to offer increased volume flexibility and performance. Vivaspin 6 can process an impressive 6ml in either swing-out buckets or fixed angle rotors accepting standard 15ml conical bottom test tubes. The Vivaspin 6 features twin vertical membranes for unparalleled filtration speeds and 100x plus concentrations.

Membrane area:	2.5cm²
Max. centrifugal force:	10000 x g
Dead volume:	< 10µl

MWCO da	PK	Cat. No.
5000	25	**9.049 765**
10000	25	**9.049 766**
30000	25	**9.049 767**
50000	25	**9.049 768**
100000	25	**9.049 769**
0.2 µm	25	**9.049 770**
5000	100	**9.049 782**
10000	100	**9.049 783**
30000	100	**9.049 784**
50000	100	**9.049 785**
100000	100	**9.049 786**
0.2 µm	100	**9.049 787**
Starter kit (5 ea. 5K to 100K)	25	**9.049 753**

2 Centrifugal concentrators, Vivaspin 500

Sartorius

Membrane: polyethersulphone. Vivaspin 500µl unit with 2.2ml sample carrier tube can be used in a fixed angle rotor. The vertical, built-in membrane guarantees minimal membrane fouling and provides rapid sample concentration. Low protein adsorption gives minimal sample loss.

Membrane surface:	0.5cm²
Max. rcf.:	15000 x g
Hold-up volume:	< 5µl

MWCO da	PK	Cat. No.
3000	25	**9.049 863**
5000	25	**9.049 755**
10000	25	**9.049 756**
30000	25	**9.049 757**
50000	25	**9.049 758**
100000	25	**9.049 759**
Starter kit (5 ea. 5K to 100K)	25	**9.049 750**
3000	100	**9.049 864**
5000	100	**9.049 850**
10000	100	**9.049 851**
30000	100	**9.049 852**
50000	100	**9.049 853**
100000	100	**9.049 854**

1 Centrifugal concentrators, Vivaspin 20

Sartorius

Membrane: polyethersulphone. Vivaspin 20ml centrifugal concentrators have been developed to offer increased volume flexibility and performance. Vivaspin 20 handles up to 20ml in swing bucket centrifuges and 14ml in 25° fixed angle rotors accepting 50ml centrifuge tubes. Featuring twin vertical membranes for unparalleled filtration speeds the Vivaspin 20 can achieve 100x plus concentrations. Remaining volume is easy to read off the printed scale on the side of the concentrator and the modified dead stop pocket further simplifies direct pipette recovery of the final concentrate.

Membrane area:	6.0cm²
Max. centrifugal force:	8000xg
Dead volume:	< 20µl

MWCO da	PK	Cat. No.
3000	12	**9.049 855**
5000	12	**9.049 771**
10000	12	**9.049 772**
30000	12	**9.049 773**
50000	12	**9.049 774**
100000	12	**9.049 775**
300000	12	**9.049 857**
1000000	12	**9.049 858**
0.2 µm	12	**9.049 776**
3000	48	**9.049 856**
5000	48	**9.049 788**
10000	48	**9.049 789**
30000	48	**9.049 790**
50000	48	**9.049 791**
100000	48	**9.049 792**
300000	48	**9.049 859**
1000000	48	**9.049 860**
0.2 µm	48	**9.049 793**
Starter kit (2 ea. 5K to 0.2 µm)	12	**9.049 754**

2 Centrifugal filtration units, Centrisart I

Sartorius

Centrisart I is a ready to use unit for small volume centrifugal ultrafiltration to separate proteins from low molecular weight substances in biological samples.

Typical applications include:
- Drug binding studies
- Determination of metabolites in serum
- Protein removal from blood samples
- Cleaning of liposomes (virus removal)

Type	PK	Cat. No.
Centrisart 5,000 MWCO CTA	12	**9.054 671**
Centrisart 10,000 MWCO CTA	12	**9.054 672**
Centrisart 20,000 MWCO CTA	12	**9.054 673**
Centrisart 100,000 MWCO PES	12	**9.054 674**
Starter pack (3 units each of 5K, 10K, 20K, 100K)	12	**9.054 675**

CTA = Cellulose tri-acetate
PES = Polyethersulphone

E & OE.

1 Cell Culture Dishes, Nunclon™Δ Surface, PS, treated, sterile

NEW!

Thermo Scientific

Surface treated dishes for cell culture available in various sizes and formats are optically clear and suitable for microscopy. Nunclon™Δ surface modification is certified non-pyrogenic and tested for both monolayer formation and cloning efficiency employing primary cells as well as repeating cell lines. Sterile. With lid.
Material: Polystyrene

Dimensions mm	Height mm	Culture surface cm²	Working volume ml	PK	Cat. No.
Ø 35	10	8.8	3	500	**9.407 393**
Ø 60	15	21.5	5	400	**9.407 395**
Ø 100	15	56.7	12.5	150	**9.407 398**
Ø 100	20	56.7	12.5	240	**9.407 401**
Ø 150	20	145.0	35	80	**9.407 399**

2 Cell culture flasks, treated, PS, sterile

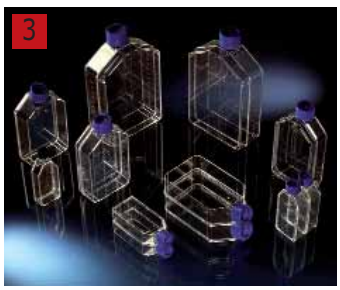
NEW!

These cell culture flasks with standard treated surfaces are available with different growth areas from 12.5 to 182 cm².
Features:
- Vented or plug-seal caps are available
- Innovative angled neck design offers good pipette and cell scraper access
- Upper triangular and wider base shape provides stability
- Protruding ridge on the back side of the flask enables easy stacking
- Special writing area near the neck
- Engraved graduation on both flask sides
- Sterilized by gamma irradiation
- Non-pyrogenic

Material: Polystyrene

Culture surface cm²	Working volume ml	Cover type	Neck	Neck thread mm	PK	Cat. No.
12.5	20	standard	angled	45	10	**6.267 172**
12.5	20	vented	angled	45	10	**6.267 173**
25.0	40	standard	angled	45	10	**6.267 174**
25.0	40	vented	angled	45	10	**6.267 175**
75.0	75	standard	angled	45	5	**6.267 176**
75.0	75	vented	angled	45	5	**6.267 177**
182.0	400	standard	angled	45	5	**6.267 178**
182.0	400	vented	angled	45	5	**6.267 179**

3 Cell Culture Flasks, Nunclon™Δ Surface, PS/PE-HD, sterile



Thermo Scientific

Nunclon™Δ cell culture flasks with surface areas from 75 to 175cm² are available with filter caps or Vent/Close caps for good gas exchange. Short, wide neck (angled or straight) allows easy access to entire growth surface. The Nunclon™Δ treatment is limited to the intended growth area. Neck areas are not treated to prevent cell attachment and growth in undesired areas. Certified non-pyrogenic and tested for both monolayer formation and cloning efficiency employing primary cells as well as repeating cell lines. Sterile.
Material flasks: Polystyrene
Material caps: HDPE

Culture surface cm²	Neck	Cover type	Working volume ml	PK	Cat. No.
25	Angled	Filter	7	160	**9.390 345**
25	Angled	Vent/Close	7	160	**9.407 027**
80	Straight	Filter	30	50	**9.390 346**
80	Straight	Vent/Close	30	50	**9.407 077**
175	Straight	Filter	68	32	**9.390 348**

1

1 2 Cell Culture Flasks EasYFlask™, treated, PS/PE-HD, sterile

Thermo Scientific

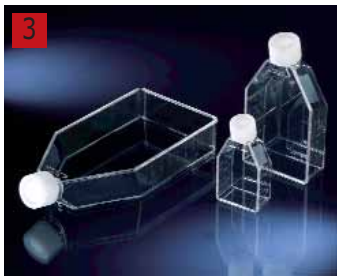
Cell culture flasks available with Nunclon™Δ modified surface (culture areas of 25cm² to 225cm²) or Collagen I and Poly-D-Lysine coated (culture areas up to 175cm²). Choose cap: Filter caps for continuous venting or Vent/Close caps. Ergonomic closure enables opening and closing with 1/3 turn and "Y"-mark allows visual verification of vent position, even when stacked. Angled, wide neck gives easy access to entire growth surface. Graduations are both printed and moulded on the side walls. Certified non-pyrogenic and tested for both monolayer formation and cloning efficiency employing primary cells as well as repeating cell lines. Sterile.
Material flasks: Polystyrene
Material caps: PE-HD
Accessories: Vent/Close caps for 25cm² flasks, order no. 4.008 543.

2

Surface	Culture surface cm²	Neck	Cover type	Working volume ml	PK	Cat. No.
Nunclon™	25	Angled	Filter	7	200	**9.390 331**
Nunclon™	25	Angled	Vent/Close	7	200	**9.390 330**
Nunclon™	75	Angled	Filter	25	100	**9.390 333**
Nunclon™	75	Angled	Vent/Close	25	100	**9.390 332**
Nunclon™*	175	Angled	Filter	55	30	**7.510 686**
Nunclon™*	175	Angled	Vent/Close	55	30	**4.008 552**
Nunclon™*	225	Angled	Filter	70	30	**6.236 539**
Nunclon™*	225	Angled	Vent/Close	70	30	**4.008 625**
Collagen I	25	Angled	Filter	7	60	**4.009 044**
Collagen I	75	Angled	Filter	25	30	**6.244 028**
Collagen I	175	Angled	Filter	55	30	**4.009 123**
Poly-D-Lysin	25	Angled	Filter	7	60	**4.009 043**
Poly-D-Lysin	75	Angled	Filter	25	30	**4.008 945**
Poly-D-Lysin	175	Angled	Filter	55	30	**4.009 122**

* Batch no. and cat. no. printed on each flask.

3



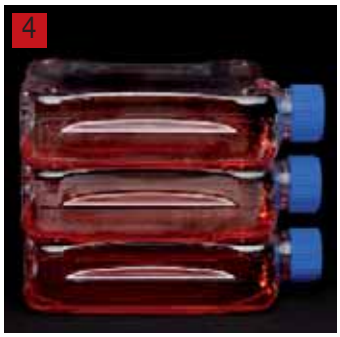
3 Cell Culture Flasks EasyFlask™/TripleFlask™, non-treated, PS/PE-HD, non-pyrogenic

Thermo Scientific

Non-treated, sterile flasks for suspension cell cultures. White caps for easy identification. Non-Pyrogenic.
Material flasks: Polystyrene
Material caps: PE-HD

Type	Capacity ml	Neck	Working volume ml	PK	Cat. No.
EasyFlask™	70	curved	7	200	**6.702 724**
EasyFlask™	260	curved	30	100	**6.222 672**
EasyFlask™	645	curved	55	30	**7.900 288**
TripleFlask™	800	straight	200	32	**7.900 289**

4



4 Cell culture flasks Nunc™ 300cm², treated, PS/PE-HD, sterile

NEW!

Thermo Scientific

The Thermo Scientific™ Nunc™ 300 cm² Cell Culture Flask is our newest and biggest cell culture flask. In fact, this 1.900 mL total volume flask provides the largest culture area of any single-layer flask on the market, and is cell culture treated to deliver a uniform surface chemistry for promoting cell attachment and expanded growth. Promotes cell attachment and growth: Vacuum-gas plasma tissue-culture treated polystyrene for uniform surface chemistry, cell attachment, spreading and promoting cell growth. Durable construction, friendly design: Blow-molded, one-piece design with straight neck and molded grip notches that make this 1.900ml flask easy to hold. Quick volume estimation and sample identification: Includes bold printed graduations (100ml to 500ml, in 50ml graduations) and a large writing patch. Maintains optimal sterility during growth and passage: Filter cap incorporates a 0.2µm pore size hydrophobic membrane that allows gas exchange while maintaining sterility. High-quality assurance: Sterilized by gamma irradiation, non-pyrogenic. Easy to stack: Prominent stacking feet on upper surface facilitate reliable stacking in incubators and under your culture hood.
Material flasks: Polystyrene
Material caps: PE-HD

Culture surface cm²	Neck	Cover type	Working volume ml	PK	Cat. No.
300	straight	Vent/Close	1900	12	**9.390 337**
300	straight	Filter	1900	12	**9.390 338**

E & OE.

1 Cell culture flasks TripleFlask Nunclon™ Δ Surface, PS/PE-HD, sterile

Thermo Scientific

Cell culture flasks with three parallel growth surfaces provide a total culture area of 500 cm² - with external dimensions of a 175 cm² standard flask. Ideal for scale-up.
Available with Vent/Close caps or filter caps for good gas exchange. Certified non-pyrogenic and tested for both monolayer formation and cloning efficiency employing primary cells as well as repeating cell lines. Sterile
Material flasks: Polystyrene
Material caps: PE-HD

1

Culture surface cm²	Neck	Cover type	Working volume ml	PK	Cat. No.
500	Straight	Filter	200	32	**9.390 351**
500	Straight	Vent/Close	200	32	**9.390 350**

Cell Culture Flasks, Nunclon™ Sphera™

NEW!

Thermo Scientific

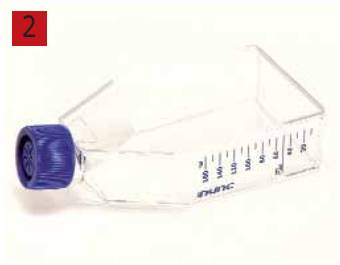
Optimizing spheroid formation
- Allows cells to grow in suspension with virtually no cell attachment
- Supports many different cell types and their ability to generate spheroids
- Enables consistent, repeatable cell growth

Growing 3D cancer cultures
- Minimizes variability and supports the consistent formation of cancer spheroids that simulate the 3D structures of tumor growth, providing a better model system for studying tumor cell progression and efficacy of anticancer agents in vitro

Promoting formation of embryoid bodies (EB)
- Demonstrates superior quality for embryoid body formation of pluripotent stem cells with minimal spontaneous differentiation
- Resultant cells are able to differentiate into all three germ layers

Certifications/Compliance
- Free of animal products Nonpyrogenic: Endotoxin tested (0.5 EU/mL)
- Biologically inert: USP biological reactivity class VI
- High level of sterility: SAL 10-6, ethylene oxide gas sterilization

2



6.265 521

Culture surface cm²	Neck	Working volume ml	Cover type	PK	Cat. No.
25	angled	7	filter	1	**6.265 520**
75	angled	25	filter	1	**6.265 521** 2

3 Multidishes, non-treated, PS, sterile

Thermo Scientific

Non-treated, sterile multidishes for suspension cell cultures are available in formats from 4 up to 48 wells. Raised well rims lower the risk of cross contamination. Excellent optical quality. Non-pyrogenic. With lid.
Material dishes and lids: Polystyrene

3

no. of wells	Working volume ml	PK	Cat. No.
4	1	120	**6.223 971**
6	3	75	**6.803 562**
12	2	75	**7.623 040**
24	1	75	**6.222 953**
48	0.5	75	**6.207 164**

1 Multidishes, Nunc™ cell culture treated surface, PS, sterile

Thermo Scientific

4- to 48-well multidishes with Nunclon™ Δ treated surface. 6-well plates also available with Poly-D-Lysine and Collagen I coating. Raised well rims lower the risk of cross contamination.
Excellent optical quality. All available surface modifications are certified non-pyrogenic and tested for both monolayer formation and cloning efficiency employing primary cells as well as repeating cell lines.
Sterile. With lid Material dishes and lids: Polystyrene

no. of wells	Culture surface cm²	Working volume ml	Description	PK	Cat. No.
4	1.9	1	Nunclon™Δ, Flat	120	**6.050 151**
4	21.8	5	Nunclon™Δ, Flat	100	**4.009 034**
6	9.6	3	Nunclon™Δ, Flat	75	**9.390 401**
6	9.6	3	Nunclon™Δ, Flat	85	**9.390 402**
6	9.6	3	Poly-D-Lysin, Flat	20	**4.008 850**
6	9.6	3	Collagen I. Flat	20	**4.008 874**
8	10.5	3	Nunclon™Δ, Flat	100	**4.009 045**
12	3.5	2	Nunclon™Δ, Flat	75	**9.390 403**
24	1.9	1	Nunclon™Δ, Flat	75	**9.390 410**
24	1.9	1	Nunclon™Δ, Flat	85	**7.634 155**
48	1.1	0.5	Nunclon™Δ, Flat	75	**9.390 411**
48	1.1	0.5	Nunclon™Δ, Flat	85	**6.206 402**

2 Cell Culture Dishes with thermosensitive UpCell™ Surface, PS

Thermo Scientific

UpCell™ Surface enables harvesting of adherent cells by simple reduction of temperature from 37°C to below 32°C.
- Without trypsinization you will get your cells with intact surface proteins for culture passaging, single- cell analyses and cell transplantation reasearch.
- No manual cell scraping to get high viability.
- Enables harvesting of cell sheets and creation of 3D- tissue models held together by normal cell junctions and extracellular matrix deposited by the cells.
- Available in sterile MicroWell™ Plate, Petridish or MultiDish format.
- With lids with airvent rims.
- Certified for functionality, sterility, non- pyrogenic and non- toxicity.

6- Well- Multidish and 3.5cm- Dish will be delivered with specific membrane for cell sheet transfer.

Type	no. of wells	Culture surface cm²	Dimensions mm	Working volume ml	PK	Cat. No.
MicroWell™ plate	96	0.3	128/86**	0.2	8	**4.008 724**
Multidish	48	1.1	128/86**	0.5	6	**4.008 658**
Multidish	24	1.9	128/86**	1	6	**4.008 657**
Multidish	12	3.5	128/86**	2	6	**4.008 656**
Multidish*	6	9.6	128/86**	3	6	**4.008 655**
Petridish 100 mm	1	56.7	92/17**	12.5	6	**4.008 763**
Petridish 100 mm, with grid	1	56.7	92/17**	12.5	6	**4.008 764**
Petridish 60 mm	1	21.5	60/15**	5	30	**4.009 049**
Petridish 60 mm, with grid	1	21.5	60/15**	5	30	**4.009 050**
Petridish 35 mm*	1	8.8	40/12**	3	30	**4.009 011**

*with membrane for cell sheet transfer
**Max. ext. dimension

E & OE.

1 Cell Culture Plates, treated, PS, sterile

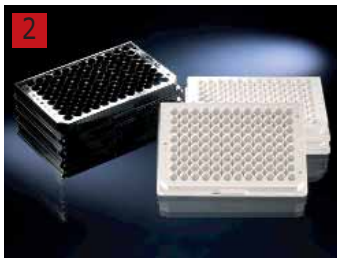
These standard surface treated cell culture plates exhibit a reduced evaporation due to raised well rims and uniform rings on the lids.
Features:
- Available with 6-, 12-, 24-, 48- or 96-wells (lid included)
- Flat well bottom
- 96-well plate also available as round bottom plate
- Single position lid reduces the risks of cross-contaminations
- Wells are labeled with alphanumeric code for easy identification
- Sterilized by gamma irradiation
- Non-pyrogenic

Material: Polystyrene

Surface	no. of wells	Culture surface	Working volume	PK	Cat. No.
		cm²	ml		
Treated	6	10.00	17.00	100	**6.267 166**
Treated	12	4.20	6.80	100	**6.267 167**
Treated	24	2.00	3.50	100	**6.267 168**
Treated	48	0.85	1.55	100	**6.267 169**
Treated	96	0.38	0.39	100	**6.267 170**
Treated*	96	0.38	0.32	100	**6.267 171**

*Round bottom

2 F96 MicroWell™ Plates, PS



Clear, white or black plates with excellent optical clarity and flat bottom wells. *Thermo Scientific*
Nunclon™Ä, Collagen I, Poly-D-Lysine surface modifications suitable for cell culture assays.
Material plates: Polystyrene
Total volume µl/well: 400

Surface	Colour	Sterile	Description	PK	Cat. No.
Nunclon™Δ	Clear	yes*	with lid	160	**6.803 751**
Nunclon™Δ	Clear	yes*	with lid	50	**9.407 473**
Nunclon™Δ	White	yes*	with lid	50	**6.802 646**
Nunclon™Δ	Black	yes*	with lid	50	**6.802 647**
Collagen I	Clear	no**	with lid	20	**4.008 866**
Poly-D-Lysin	Clear	no**	with lid	20	**4.008 858**
Non-treated	Clear	yes	with lid	160	**6.237 877**
Non-treated	White	yes	with lid	50	**6.231 848**
Non-treated	Black	yes	with lid	50	**7.601 891**
Non-treated	Clear	yes	without lid	180	**4.008 715**
Cell culture	Clear	yes	without lid	180	**4.008 767**
Non-treated***	Clear	yes	with lid	160	**6.803 101**
Non-treated	Clear	yes	without lid	50	**9.390 515**
Cell culture	Clear	yes	without lid	50	**9.407 475**

* certified.
**Produced in clean environment.
***with Barcode

96-well plate Nunclon™ Sphera™

6.264 322

Thermo Scientific

Optimizing spheroid formation
- Allows cells to grow in suspension with virtually no cell attachment
- Supports many different cell types and their ability to generate spheroids
- Enables consistent, repeatable cell growth

Growing 3D cancer cultures
- Minimizes variability and supports the consistent formation of cancer spheroids that simulate the 3D structures of tumor growth, providing a better model system for studying tumor cell progression and efficacy of anticancer agents in vitro

Promoting formation of embryoid bodies (EB)
- Demonstrates superior quality for embryoid body formation of pluripotent stem cells with minimal spontaneous differentiation
- Resultant cells are able to differentiate into all three germ layers

Certifications/Compliance
- Free of animal products
- Nonpyrogenic: Endotoxin tested (0.5 EU/mL)
- Biologically inert: USP biological reactivity class VI
- High level of sterility: SAL 10-6, ethylene oxide gas sterilization
- Shelf Life 4 years

Surface	Colour	Sterile	Description	PK	Cat. No.
Nunclon™ Sphera™	Clear	SAL 10^{-6}	round bottom	1	**6.264 322** 3
Nunclon™ Sphera™	Clear	SAL 10^{-6}	flat bottom	1	**6.264 323**

1

4.009 096

96-well plate Nunc™ Edge, 96-wells with flat bottom, PS

NEW!

Thermo Scientific

Minimize plate evaporation through the uniquely engineered design of Thermo Scientific™ Nunc™ Edge-96 Well Plate. The edge plate is engineered for optical superiority allowing your automated imaging systems to operate efficiently. The plates are made of clear polystyrene for excellent optical properties making it ideal for optical measurements

Features:
- Reduced Edge Effect virtually eliminates evaporation in lengthy incubations
- Overall plate evaporation rate reduced to <2% after seven days of incubation
- Low evaporation permits full-plate results
- Large evaporative buffer zones eliminate well-to-well variability
- Perimeter moat can be filled with 1.7mL sterile H_2O or media
- Low background fluorescence, ideal for optical instruments
- Ideal for image-based high content applications like measuring primary neuron cultures
- Customized bar coding available (upon request)
- Untreated or cell culture treated hydrophilic surface (Nunclon™ Δ)

Material: Polysytrene
Total well volume: 400µL

Surface	Colour	Sterile	Description	PK	Cat. No.
Nunclon™Δ	Clear	yes	without lid	160	**4.009 096** 1
Nunclon™Δ	Clear	yes	with lid	50	**4.008 772**
Non-treated	Clear	no	with lid	160	**4.009 033**
Non-treated	Clear	yes	with lid	50	**4.008 723**

2

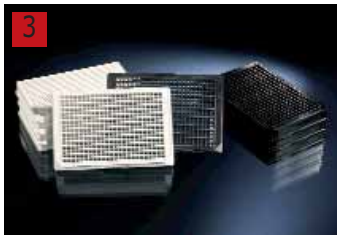
2 F96 Well Optical Bottom Plates, PS

Thermo Scientific

- Nunclon™Δ surface for cell culture
- Non-treated plates are optimised for scintillation counting
- White or black upper structure with polymer bottom plates combine the optical clarity of virgin crystalline polystyrene with optimal surface for a wide range of HTS applications
- Working volume range: 50 - 200µl/well

Surface	Colour	Sterile	Description	PK	Cat. No.
Cell Culture	White	yes	with lid	30	**4.008 852**
Cell Culture	Black	yes	with lid	30	**6.801 890**
Non-treated	White	no	without lid	30	**6.231 847**
Non-treated	Black	no	without lid	30	**6.901 329**

3



3 384 Well Optical Bottom Plates, PS

Thermo Scientific

Combining a white or black upper structure with an optically clear, flat well bottom polymer base allows for reading from bottom and top, or both. Nunclon™Δ surface modifications are for cell culture optimized. Non-treated plates are ideal for scintillation counting.

Material plates: Polystyrene
Total volume µl/well: 120

Surface	Colour	Sterile	Description	PK	Cat. No.
Cell Culture	White	yes*	with lid	30	**4.009 018**
Cell Culture	Black	yes*	with lid	30	**4.009 004**
Non-treated	White	no	without lid	30	**4.008 951**
Non-treated	Black	no	without lid	30	**4.008 753**

* certified.

We can supply this manufacturer's whole product range !

partner of the LLG Lab Logistics Group

Thermo SCIENTIFIC

E & OE.

1 BRAND*plates*® Insert System

For manual and automated cell and tissue culture work. *BRAND*
Includes two different cell culture plates and two types of cell culture inserts, which can also be used in combination.

1

Quality features

General
- Sterile according to ISO 11 137 and AAMI-Guidlines, SAL 10^{-6}
- Non cytotoxic according to ISO 10 993 5, endotoxin free (<0.01 EU/ml), free from DNA, DNase and RNase.

Plates
- Innovative, specially designed wells with side feeding ports,
- Manufactured according to the requirements in ANSI/SLAS Standards 1 and 4
- pureGrade™ S (untreated) and cellGrade™ plus (TC treated) surface

Inserts
- Track-etched PC- und PET membranes
- Hanging inserts
- Perfect positioning in the plates via guide ridges
- cellGrade™ plus surface (TC treated)

BRAND*plates*® plates
Cell culture plates for insert strips

24-well Standard Plate
The plate includes 24 individually fillable wells that can be fitted with strips of 4 inserts and/or individual inserts.

6-well Special Plate
The 4 wells are all connected as one large, elongated well. This well can be fitted with a strip of 4 inserts so that all 4 of the inserts in the strip can be supplied with medium at the same time.

BRAND*plates*® Insert Strips and Insert System
Cell culture inserts, smooth walled

Cell culture inserts with Inlet Opening System*
With special inlet channels, for automated in vitro preparation of human tissues. The Inlet Opening System*enables rapid, consistent changing of media, from submersion culture to air-lift culture. The special inlet channels enable adjustment of the medium level without damage to the skin mode

* Patent pending

BRAND*plates*® Insert System, 6-well Plates filled with 6 Insert Strips

NEW!

PS. cellGrade™ plus surface, sterile. Insert strips smooth walled or Inlet Opening System*. *BRAND*
In each case with lid with condensation rings.

2
6.257 647

Description	Pore size µm	Package contents	Membrane	PK	Cat. No.
smooth-walled	0.40	5 (30 Insert Strips)	PC	5	**6.257 647** 2
smooth-walled	1.00	5 (30 Insert Strips)	PC	5	**6.257 648**
smooth-walled	3.00	5 (30 Insert Strips)	PC	5	**6.257 649**
smooth-walled	8.00	5 (30 Insert Strips)	PC	5	**6.257 650**
Inlet Opening System	0.40	5 (30 Insert Strips)	PC	5	**6.257 651**
Inlet Opening System	1.00	5 (30 Insert Strips)	PC	5	**6.257 652**
Inlet Opening System	3.00	5 (30 Insert Strips)	PC	5	**6.257 653**
Inlet Opening System	8.00	5 (30 Insert Strips)	PC	5	**6.257 654**
smooth-walled	0.40	5 (30 Insert Strips)	PET	5	**6.257 655**
smooth-walled	1.00	5 (30 Insert Strips)	PET	5	**6.257 656**
smooth-walled	3.00	5 (30 Insert Strips)	PET	5	**6.257 657**
smooth-walled	8.00	5 (30 Insert Strips)	PET	5	**6.257 658**
Inlet Opening System	0.40	5 (30 Insert Strips)	PET	5	**6.257 659**
Inlet Opening System	1.00	5 (30 Insert Strips)	PET	5	**6.257 660**
Inlet Opening System	3.00	5 (30 Insert Strips)	PET	5	**6.257 661**
Inlet Opening System	8.00	5 (30 Insert Strips)	PET	5	**6.257 662**

* Patent pending

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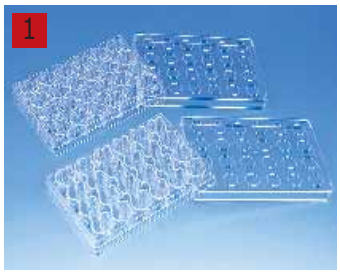


1 BRANDplates® 24-well Standard-Plates or 6-well Plates

NEW!

PS. pureGrade™ S or cellGrade™ plus surface, sterile. In each case with lid with condensation rings.
Packaging: single packed, with lid

BRAND

Description	Surface	PK	Cat. No.
24 well standard plate	pureGrade™ S	10	**6.257 627**
6 well plate	pureGrade™ S	10	**6.257 628**
24 well standard plate	cellGrade™ plus	10	**6.257 629**
6 well plate	cellGrade™ plus	10	**6.257 630**

2

2 BRAND*plates*® Single Insert System, 13mm, smooth walled or with Inlet Opening System

NEW!

PS. cellGrade™ plus surface, sterile. Single Inserts (single packed).

BRAND

Description	Pore size µm	Membrane	Height Insert mm	PK	Cat. No.
smooth-walled	0.40	PC	13	48	**6.266 249**
smooth-walled	1.00	PC	13	48	**6.266 253**
smooth-walled	3.00	PC	13	48	**6.266 257**
smooth-walled	8.00	PC	13	48	**6.266 261**
Inlet Opening System	0.40	PC	13	48	**6.266 250**
Inlet Opening System	1.00	PC	13	48	**6.266 254**
Inlet Opening System	3.00	PC	13	48	**6.266 258**
Inlet Opening System	8.00	PC	13	48	**6.266 262**
smooth-walled	0.40	PET	13	48	**6.266 251**
smooth-walled	1.00	PET	13	48	**6.266 255**
smooth-walled	3.00	PET	13	48	**6.266 259**
smooth-walled	8.00	PET	13	48	**6.266 263**
Inlet Opening System	0.40	PET	13	48	**6.266 252**
Inlet Opening System	1.00	PET	13	48	**6.266 256**
Inlet Opening System	3.00	PET	13	48	**6.266 260**
Inlet Opening System	8.00	PET	13	48	**6.266 264**

3

6.257 631

4

6.257 635

5

6.266 265

6

6.266 266

BRAND*plates*® Insert System, 13mm or 9mm, smooth walled or with Inlet Opening System

NEW!

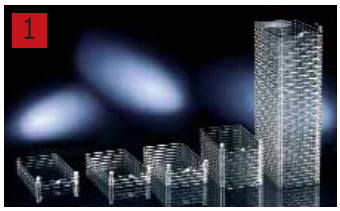
PS. cellGrade™ plus surface, sterile. Strips of 4 inserts, divisible (single packed).

BRAND

Description	Pore size µm	Membrane	Height Insert mm	PK	Cat. No.
smooth-walled	0.40	PC	13	12	**6.257 631** 3
smooth-walled	1.00	PC	13	12	**6.257 632**
smooth-walled	3.00	PC	13	12	**6.257 633**
smooth-walled	8.00	PC	13	12	**6.257 634**
Inlet Opening System	0.40	PC	13	12	**6.257 635** 4
Inlet Opening System	1.00	PC	13	12	**6.257 636**
Inlet Opening System	3.00	PC	13	12	**6.257 637**
Inlet Opening System	8.00	PC	13	12	**6.257 638**
smooth-walled	0.40	PET	13	12	**6.257 639**
smooth-walled	3.00	PET	13	12	**6.257 641**
smooth-walled	8.00	PET	13	12	**6.257 642**
Inlet Opening System	0.40	PET	13	12	**6.257 643**
Inlet Opening System	1.00	PET	13	12	**6.257 644**
Inlet Opening System	3.00	PET	13	12	**6.257 645**
Inlet Opening System	8.00	PET	13	12	**6.257 646**
smooth-walled	0.40	PC	9	12	**6.266 265** 5
smooth-walled	1.00	PC	9	12	**6.266 269**
smooth-walled	3.00	PC	9	12	**6.266 271**
smooth-walled	8.00	PC	9	12	**6.266 273**
Inlet Opening System	0.40	PC	9	12	**6.266 266** 6
smooth-walled	0.40	PET	9	12	**6.266 267**
smooth-walled	1.00	PET	9	12	**6.266 270**
smooth-walled	3.00	PET	9	12	**6.266 272**
smooth-walled	8.00	PET	9	12	**6.266 274**
Inlet Opening System	0.40	PET	9	12	**6.266 268**

E & OE.

1 Cell Factories with Nunclon™Δ Surface, PS, sterile



Thermo Scientific

Cell culture Cell Factories are optimal for industrial scale production of vaccines, monoclonal antibodies or pharmaceuticals. Nunclon™Δ modification is certified for cell culture, ideal for adherent cells and can be used for suspension cultures. Available in 1, 2, 4, 10 or 40 tray versions for easy scale-up. Additional connectors etc. please see Cell Factories Accessories. Sterile.
Material Cell Factories: Polystyrene

No. of chambers	Culture surface cm²	Capacity ml	PK	Cat. No.
1	632	200	8	**6.800 181**
2	1264	400	6	**6.231 100**
4	2528	800	10	**4.009 101**
10	6320	2000	2	**6.301 727**
40	25280	8000	2	**6.300 402**

2 Cell Factories EasyFill™ mit Nunclon™Δ Surface, PS, sterile

Thermo Scientific

A time and space saving vessel for large scale cell culture production. Suitable for industrial scale production of vaccines, monoclonal antibodies or pharmaceuticals. Nunclon™Δ surface modification is certified for cell culture and ensures consistent cell growth layer to layer, lot to lot. Ready to use and easy to fill and empty with plug and play connection. Wide range of accessories available for different methods of filling, venting and harvesting (please see Cell Factories Accessories). Sterile.
Material cell factories: Polystyrene

No. of chambers	Culture surface cm²	Capacity ml	PK	Cat. No.
1	630	200	6	**4.008 721**
2	1260	400	6	**4.008 786**
4	2520	800	4	**4.008 806**
10	6300	2000	2	**4.008 779**

EasyFill™ Cell Factory System Accessories, PE-HD

Thermo Scientific

It is now easy to create a Thermo Scientific Nunc EasyFill™ Cell Factory system for your applications.
- Connections made easy: Plug a media bag or tubing set to any cell factory.
- Save time and reduce costs: Minimise cleaning processes and sterility validations. Accessories are gamma irradiated and individually wrapped.
- Prevent build up of back pressure during filling application: New venting options provide additional air venting when filling and harvesting by gravity or with a peristaltic pump.

Description	PK	Cat. No.	
EasyFill™ Cell Factory Universal Adaptor Cap	12	**9.390 710**	3
EasyFill™ Cell Factory Barbed Cap, 1/4"	12	**9.390 711**	4
EasyFill™ Cell Factory Barbed Cap, 3/8"	12	**9.390 712**	5
1.0µm Air Vent Assembly, sterile	2	**9.390 713**	6
0.22µm Air Vent Assembly, sterile	2	**9.390 714**	7
Cell Factory Filling Tubing Set w/ Male MPC, sterile	2	**9.390 715**	8

3

9.390 710

4

9.390 711

5

9.390 712

6

9.390 713

7

9.390 714

8

9.390 715

1 Roller Bottles, InVitro/TufRol™/TufRol EZ, sterile

Thermo Scientific

Roller Bottles InVitro

For industrial scale production of vaccines, monoclonal antibodies or pharmaceuticals. In vitro Roller Bottles molded of durable PETG.
Excellent substrate for adherent cells. Quick-action ergonomic closure reduces wrist stain and increases productivity. Wide range of sizes with surface areas from 1.050cm² to 4.200cm². Available in both Standard and the patented Expanded Surface (XPS), which enables increased cell growth and product yield without the need to purchase additional production equipment or increase labor. In Vitro XPS Roller Bottles have specially designed pleats that dramatically expand the available growth surface. The pleats are oriented in the direction of rotation to minimise turbulence. Flat panels between sections allow microscopic viewing and expedite drainage during medium replacement and cell harvest. Easy-to-read graduations for medium fills. Lot number is printed on each bottle to maximise traceability. Sterile.

Roller Bottles TufRol™ and TufRol™ EZ

TufRol™ Roller Bottles enable to scale cell culture processes from plates, to flasks, to roller bottles. They can be used as the primary production vessel or as a mid-scale expansion platform to feed Cell Factories or Suspension Culture Bioreactors. One-piece, seamless design reduces possibility of leaking. TufRol™ EZ bottles with shallow or deep indents make them excellent for manual and automated handling. Proprietary manufacturing process for greater impact resistance. Vertical expanded surfaces version facilitates emptying and reduces retention of product. Certified non-cytotoxic, non-pyrogenic and sterile (10^{-3} SAL).
Validation Binder available.

Description	Culture surface cm²	Material	PK	Cat. No.
InVitro 1.2X, smooth surface, non-vented cap	1050	PETG	20	**4.008 624**
InVitro 1.2X, smooth surface, non-vented cap	1050	PETG	20	**4.008 608**
InVitro 1.2X, smooth surface, vented cap	1050	PETG	20	**4.008 674**
InVitro 1XL, smooth surface, non-vented cap	1800	PETG	22	**4.008 809**
InVitro 2X, pleated surface, non-vented cap	1700	PETG	20	**4.008 740**
InVitro 2.5X, pleated surface, non-vented cap	2100	PETG	20	**4.008 812**
InVitro 2.5X, pleated surface, non-vented cap	2100	PETG	20	**4.008 797**
InVitro 5X, pleated surface, non-vented cap	4200	PETG	22	**4.009 036**
TufRol™, Smooth surface, easy on/off vented screw-cap	850	PS	20	**9.407 100**
TufRol™, Smooth surface, easy on/off non-vented screw-cap	850	PS	20	**9.407 101**
TufRol™, Smooth surface, easy on/off non-vented screw-cap	850	PS	20	**9.407 102**
TufRol™, Smooth surface, in double bag, easy on/off non-vented screw-cap	850	PS	20	**9.407 103**
TufRol™ EZ, Smooth surface, shallow indent, EZ twist vented cap	850	PS	20	**9.407 104**
TufRol™ EZ, Smooth surface, shallow indent, EZ twist vented cap	850	PS	20	**9.407 105**
TufRol™ EZ, Smooth surface, shallow indent, in double bag, EZ twist vented cap	850	PS	20	**9.407 106**
TufRol™ EZ, Smooth surface, deep indent, EZ twist vented cap	850	PS	20	**9.407 107**
TufRol™ EZ, Smooth surface, deep indent, EZ twist vented cap	850	PS	20	**9.407 108**
TufRol™ EZ, Smooth surface, deep indent, EZ twist vented cap	850	PS	20	**9.407 109**
TufRol™ EZ, Smooth surface, deep indent, in double bag, EZ twist vented cap	850	PS	20	**9.407 110**
TufRol™, Pleated surface, in double bag, easy on/off vented cap	1450	PS	20	**9.407 111**
TufRol™, Pleated surface, easy on/off non-vented cap	1450	PS	20	**9.407 112**
TufRol™, Pleated surface, in double bag, easy on/off non-vented cap	1450	PS	20	**9.407 113**
Vented caps for TufRol™ roller bottles, sterile, PE-HD		PE-HD	500	**9.407 114**
Easy on/off caps for TufRol™ roller bottles, sterile, PE-HD		PE-HD	500	**9.407 115**

Articles with double bag for cleanroom use.

2 Cell Scrapers, sterile

Thermo Scientific

Available in two different lengths with adjustable blade for optimal application flexibility.
Non-pyrogenic. Sterile.

For bottles cm²	Length cm	Height mm	Width mm	PK	Cat. No.
25 - 80	23	7.5	15.5	50	**6.222 130**
75 - 175	32	16.0	17.5	250	**9.390 356**

E & OE.

1 LLG-Cell strainers, Nylon, sterile

NEW!

- Available in 3 mesh sizes, 40 µm: 70 µm, and 100 µm
- Color coded mesh size
- Designed to fit into 50 ml tubes
- Individually packaged
- Handle and mantle surface for improved aseptic handling
- Nylon mesh
- Non-pyrogenic

Mesh size µm	Colour code	PK	Cat. No.
40	blue	50	**6.268 093**
70	white	50	**6.268 092**
100	yellow	50	**6.268 091**

2 LLG-Pestle for Cell strainers, sterile

NEW!

- Facilitates the creation of homogenous suspensions
- Individually packaged
- Non-pyrogenic, Dnase/Rnase-free
- Sterile

Type	PK	Cat. No.
LLG-Pestle for Cell strainers, sterile	100	**6.268 090**

3 Cellstrainers EASYstrainers™, PP, sterile

NEW!

Greiner Bio-One

- Available in 3 mesh sizes: 40µm, 70µm and 100µm
- Color coded mesh size
- Designed to fit into 50ml tubes
- Individually packaged, convenient blister pack
- Handle and mantle surface for improved aseptic handling
- Vent opening for fast filtration
- PET mesh
- Non-pyrogenic

Mesh size µm	Colour code	PK	Cat. No.
40	green	50	**6.266 185**
70	blue	50	**6.266 186**
100	yellow	50	**6.266 187**

4 Cellstrainers Pierce™ Tissue Strainers, 250µm, Nylon

NEW!

Perbio Science Deutschland

- 250µm mesh size
- Designed to fit into 15ml tubes
- Up to 2.5ml tissue sample per load
- Nylon mesh

Mesh size µm	PK	Cat. No.
250	50	**6.266 188**

1

1 LLG-Serological pipettes type 1, PS, paper/plastic peel, sterile

- 1 ml, 5 ml, 10 ml, 25 ml and 50 ml pipettes contain a bi-directional secondary graduation scale for precise dosing
- Also available as short-pipettes (5 ml, 10 ml and 25 ml) or wide-mouth pipette (10 ml)
- Increased volume capacity through extra graduations
- Color coded ringmark for easy volume identification
- Single packed in easy-to-open plastic/paper packaging
- Plugged
- Pyrogen-free
- Sterile

Volume ml	Grad. ml	Colour code	Negative graduations up to	PK	Cat. No.
1	1/100	yellow	0,3	500	**9.380 440**
2	1/50	green	0,6	500	**9.380 441**
5	1/10	blue	3	200	**7.930 401**
10	1/10	orange	3	200	**6.268 240**
10	1/10	orange (wide mouth)	3	200	**9.380 442**
25	2/10	red	8	150	**7.930 403**
50	5/10	purple	10	100	**9.380 443**
5	1/10	blue (short form)	3	200	**6.265 881**
10	2/10	orange (short form)	10	150	**6.265 882**
25	5/10	red (short form)	9	100	**6.265 883**

2

3

2 3 LLG-Serological pipettes type 2, PS, paper/plastic peel, sterile

NEW!

- Single-piece pipette-bodies (except 50 ml pipette)
- 5 ml, 10 ml, 25 ml and 50 ml pipettes contain a bi-directional secondary graduation scale for precise dosing
- Increased volume capacity through extra graduations
- Color coded plug for easy volume identification
- Single packed in easy-to-open plastic/paper packaging
- Plugged
- Pyrogen-free
- Sterile

Volume ml	Grad. ml	Colour code	Negative graduations up to	PK	Cat. No.
1	1/100	yellow	0.3	500	**6.266 995**
2	1/50	green	0.4	500	**6.266 996**
5	1/10	blue	3	250	**6.266 997**
10	1/10	orange	3	200	**6.266 998**
25	2/10	red	2	100	**6.266 999**
50	5/10	purple	9	100	**6.267 100**

4

5

4 5 LLG-Serological pipettes Type 3, PS, plastic/plastic pack, sterile

NEW!

- Specially suited for use in clean rooms
- Single packed in easy-to-open plastic/plastic packaging
- Increased volume capacity through extra graduations
- Color coded for easy volume identification
- Plugged
- Pyrogen-free
- Sterile

Volume ml	Grad. ml	Colour code	Negative graduations up to	PK	Cat. No.
1	0.01	clear	0.3	1000	**6.268 099**
2	0.01	clear	0.3	1000	**6.268 100**
5	0.1	blue	2.0	200	**6.268 101**
10	0.1	orange	3.0	500	**6.268 102**
25	0.2	red	10.0	200	**6.268 103**
50	0.5	purple	10.0	200	**6.268 104**

E & OE.

Graduated pipettes for tissue culture, clear glass, amber stain graduation

EX (TD) calibrated. Short form. Main point ring graduation. Specially for tissue culture and working on cleanroom benches. With durable amber stain graduation. Zero to the tip, cotton plugged (8mm outer diameter). With mouth piece for cotton plug. *Hirschmann*

Volume ml	Grad. ml	Tolerance ± ml	Overall length ± 3 mm	PK	Cat. No.
1	0.1	-	230	1	**6.080 498**
2	0.1	-	230	1	**6.090 340**
5	0.1	-	230	1	**6.080 523** 1
10	0.1	-	230	1	**6.510 172**
25	0.2	-	230	1	**6.510 335**

1

6.080 523

2 3 LLG-Electrical pipette pump *Plus*

This ergonomic pipette controller is lightweight, made from UV resistant material, features adjustable valves and is microprocessor controlled for reliability and accuracy. The powerful pump offers rapid yet sensitive aspiration and dispensing. Filling and dispensing speed is easily set using the same hand by pressing the large control button. The bright LED display will indicate which of the three modes has been selected, High, Low or Gravity Mode. The user labelling area enables customization and instant recognition and/or task designation. Additional features include hand neutral design, concave padded triggers, a 1ml pipette adapter to increase stability of small pipettes, a long life Li-Ion battery that allows 20 hours of continuous usage, low battery indicator and two holders as standard

- For 1-100ml glass or plastic pipettes
- Soft touch triggers
- 5 different coloured autoclavable nose pieces as standard
- Uses standard 0.45µm hydrophobic filters
- Long life, easily changeable rechargeable battery
- Sensitive and adjustable aspiration and dispensing
- Labelling area for identification
- Delivered completely with universal voltage and plug faced charger
- Comes with bench stand and magnetic/fixable wall mount

2

3

Description	PK	Cat. No.
LLG-Electrical pipette pump *Plus*	1	**9.281 041**
Membrane filter, 0.45µm, PTFE, non-sterile	5	**9.281 005**

4 5 Disposable Erlenmeyer Flasks with screw closure, Type 4112, 4113, PETG, sterile

Sterile disposable flasks with white PE-HD closure reduce the chance for cross contamination. Ideal for shaker and suspension cell culture, media preparation or storage. Made of light, crystal clear PETG plastic. Molded-in graduations. Leak-proof PE-HD screw closures open to vent with 1/4 turn. Flasks offer a 5-year shelf life, a 10-6 SAL, are non-pyrogenic and non-cytotoxic. Individually packaged for easy storage and handling. Available with flat or baffled bottom.
Vented closures with finish 38-430 (for 125ml and 250ml) or with finish 45-430 (for 500ml, 1000ml and 2000ml) separate available. *Thermo Scientific*

Type	Description	Volume ml	Cover type	PK	Cat. No.
4112	Flat Bottom	125	38-430	24	**7.630 506**
4112	Flat Bottom	250	38-430	12	**6.802 833**
4112	Flat Bottom	500	45-430	12	**6.229 662**
4112	Flat Bottom	1000	45-430	6	**6.234 596**
4112	Flat Bottom	2000	45-430	4	**9.141 301**
4112	Flat Bottom	2800	70	4	**9.141 302**
4113	Baffled Bottom	125	38-430	24	**6.901 167**
4113	Baffled Bottom	250	38-430	12	**6.901 168**
4113	Baffled Bottom	500	45-430	12	**6.234 594**
4113	Baffled Bottom	1000	45-430	6	**6.234 595**
4113	Baffled Bottom	2000	45-430	4	**6.227 923**
4113	Baffled Bottom	2800	70	4	**9.141 303**
4114	Vented Closure		38-430	12	**6.229 663**
4114	Vented Closure		45-430	12	**6.227 924**

4

5

Our complete Liquid Handling range - please see page 830.

1 2 Disposable Erlenmeyer Flasks with vented closure, Type 4115, 4116, PETG, sterile

Thermo Scientific

With blue vented closure, the chance for cross contamination is reduced. Ideal for shaker and suspension cell culture, media preparation or storage. Made of light, crystal clear PETG. Molded-in graduations. Leak-proof PE-HD closure has a hydrophobic 0.2µm PTFE membrane that allows sterile air exchange. Flasks offer a 5-year shelf life, a 10^{-6} SAL, are non-pyrogenic and non-cytotoxic. Available with flat or baffled bottom. Individually packaged for easy storage and handling.

Type	Description	Capacity ml	Cover type	PK	Cat. No.
4115	Flat Bottom	125	38-430	24	**6.234 530**
4115	Flat Bottom	250	38-430	12	**6.231 087**
4115	Flat Bottom	500	45-430	12	**9.141 304**
4115	Flat Bottom	1000	45-430	6	**9.141 305**
4115	Flat Bottom	2000	45-430	4	**9.141 306**
4115	Flat Bottom	2800	70	4	**9.141 307**
4116	Baffled Bottom	125	38-430	24	**9.141 308**
4116	Baffled Bottom	250	38-430	12	**9.141 309**
4116	Baffled Bottom	500	45-430	12	**9.141 310**
4116	Baffled Bottom	1000	45-430	6	**9.141 311**
4116	Baffled Bottom	2000	45-430	4	**9.141 312**
4116	Baffled Bottom	2800	70	4	**9.141 313**

3 Square Media Bottles Typ 2019, PETG, sterile

Thermo Scientific

With white PE-HD screw closure. Reduced permeability to CO_2/O_2 which reduces pH-shift. Bottles and closures are radiation-sterilised and non-pyrogenic to eliminate costly washing, depyrogenation and autoclaving steps. Heatshrink band around closure and neck provides tamper-evident seal. Packed in shrink-wrapped trays. 2L size has molded-in handgrips and a 53-mm (53B) white closure. Bottles are sterile to 10-6 SAL, non-pyrogenic, non-cytotoxic and comply with USP Class VI guidelines. Sterile. Transparent. Leakproof. Graduated.

Type	Capacity ml	Cover type	Dimensions mm	PK	Cat. No.
2019	30	diam. 20 mm	64 x 38 x 38	24	**9.103 121**
2019	60	diam. 24 mm	82 x 41 x 41	24	**9.103 122**
2019	125	diam. 38 mm/design 430	110 x 54 x 54	24	**9.103 123**
2019	250	diam. 38 mm/design 430	146 x 61 x 61	24	**9.103 124**
2019	500	diam. 38 mm/design 430	177 x 74 x 74	12	**9.103 125**
2019	1000	diam. 38 mm/design 430	220 x 94 x 94	12	**9.103 126**
2019	2000	diam. 53 mm/design 53B	271 x 116 x 116	6	**9.103 127**

4 Media Bottles with Certified Cleanness Type 382019, PETG, sterile

Thermo Scientific

Suited for biopharmaceutical processing and storage of critical reagents and bulk intermediates such as vaccine and protein therapeutic preparations. Manufactured in a certified ISO 14644-1 Class 7 cleanroom. Containers are lot certified to comply with particulate limits specified in USP <788>, EP 2.9.19, and JP 14th ed. Part 1, Section 24. Packaging is designed for cleanroom applications. Bottle and closure are secured with a tamper-resistant heat-shrink band and packaged in heat-sealed bags to support cleanroom operations. USP Class VI, EP Modified Abnormal Toxicity, and USP <661> physicochemical tests compliant. Bottles meet the requirements for USP Class VI, EP Modified Abnormal Toxicity Test, are non-cytotoxic, non-pyrogenic, non-hemolytic, and comply with USP <661> physicochemical guidelines. Resins are free of animal derived components (ADCF). Leakproof.

Type	Capacity ml	Cover type	PK	Cat. No.
382019	30	diam. 20 mm /design 415	6	**9.102 958**
382019	60	diam. 24 mm /design 415	6	**9.102 959**
382019	125	diam. 38 mm /design 430	6	**9.102 960**
382019	250	diam. 38 mm /design 430	6	**9.102 961**
382019	500	diam. 38 mm /design 430	4	**9.102 962**
382019	1000	diam. 38 mm /design 430	4	**9.102 963**
382019	2000	diam. 53 mm /design 53B	1	**9.102 964**

E & OE.

1 InVitro™ Biotainer®-Bottle, Type 3025 , PETG, sterile

With PE screw cap with silicone seal. Ready to use. With printed graduations in ml. With ribbed hand-grips (except 125ml and 5000ml). Materials meet current USP VI, are non-cytotoxic and non-pyrogenic. *Thermo Scientific*

Type	Capacity ml	Cover type	PK	Cat. No.
3025	125	38 mm	5	**9.102 972**
3005	500	38 mm	5	**9.102 970**
3110	1000	48 mm	35	**9.102 974**
3230	2000	48 mm	20	**9.102 977**
3415	5000	48 mm*	6	**6.233 835**
3415	5000	48 mm	1	**9.102 984**

* with PE handle.

2 Filling and Venting Closures with 3 ports, Type 2162, PP

With TPE gasket and port caps, Nalgene 50 platinum-cured silicone tubing. All plastic screw closures for sterile liquid transfer of tissue media, biological reagents, pure water and chemicals to and from Nalgene-carboys. For applications such as bio-reactors and fermenters. Suitable for all large Nalgene carboys or bottles with screw closures of 53mm (53B) or 83mm (83B). Includes two Nalgene 550 platinum-cured silicone tubing for drop tube and splash guard. Can be used with Nalgene carboy bottles with properly set up peristaltic pumps. Autoclavable. *Thermo Scientific*

Type	Dimensions (dia. x H) mm	Cover type mm	For tubing bore mm	PK	Cat. No.
2162	66,7 x 68,6	53	6,3	1	**7.048 080**
2162	102 x 98	83	12,7	1	**7.048 081**
2162	102 x 98	83	6,3	1	**7.048 082**

3 Aspirator with trap flask FTA-1

Designed for routine aspiration of the supernatent alcohol/buffer from the walls of microtubes during DNA/RNA purification and other macromolecule reprecipitation techniques. *Grant*

- All in one system with integrated pump
- Pump is for 1.5ml reaction tubes and very small volumes with an average suction power of 600mL/min
- Trap flasks volume 1L
- Fitted with hydrophobic microbiological filter
- Vacuum pressure of - 500mbar

- The hydrophobic microbiological suction filter eliminates risk of contamination from the trap flask. Efficiency up to 99.9%, holds particles bigger than 0.027 micron, which are smaller than agents of Hepatitis A, B and C.
- Polyethylene tube connects collecting tip to the trapping flask
- Built-in micro-compressor creates negative pressure in trapping flask for removal of liquid from microtubes
- Slim power cord can be used inside workstations
- 1L trap flask for collection of alcohol/buffer from microtest tube walls during reprecipitation techniques
- Tube holder to accommodate two tubes for collecting tip washing and storing, enabling re-use of the tip.

Type	Description	PK	Cat. No.
FTA-1	All in one system	1	**9.721 058**
FTA-B	Spare aspiration trap bottle	1	**9.721 075**
FTA-T	Spare tubing set	1	**9.721 076**
MA-8	8 channel adapter set	1	**9.721 077**
MA-8T	8 channel tip	1	**9.721 078**

Filter Units - please see page 690.

In-Line Filters - please see page 684.

1 EcoVac safety suction systems

schuett-biotec

For safe and comfortable removal of liquid excess. EcoVac increases the safety standard, when working with infectious material. Completely autoclavable. Screw-cap of safety bottle incl. 2 self-locking fittings. When tubing is removed, they close automatically and the bottle will be sealed hermetically. Safety bottle made of impact and chemical-resistant polypropylene, with screw-cap incl. 2 self-locking fittings, ventilation system, safety filter and 5m of silicone tubing.

EcoVac vacuum pump (optional):
Quiet with low vibration. Throughput 4L/min., 300mbar ult. vacuum, with illuminated on/off switch and 1m connecting cable. Overall dimensions: 80mm x 60mm x 160mm (W x H x D). 230V 50/60Hz.

Foot-switch (optional):
For short-time repeated use of EcoVac.

Supplied with: EcoVac system (2 or 4), safety bottle (breakproof and chemically stable) with screw cap and 2 self-locking fittings, silicone tubing 2 x 1.5m (autoclavable), safety filter, 2 angled fittings for tubing connection, 1 aeration insert.

Type	Capacity Litres	PK	Cat. No.
EcoVac 2 System	2	1	**9.777 000**
EcoVac 4 System	4	1	**9.777 001**
Vacuum pump, incl. 1m cable		1	**9.777 005**
Foot switch		1	**9.777 008**
Safety filter		2	**9.777 009**
Spare 2L bottle incl. Screw-cap with 2 self-locking fittings		1	**9.777 007**
Spare 4L bottle incl. Screw-cap with 2 self-locking fittings		1	**9.777 010**

2 Safety suction systems AA, AC and AZ series

Hettich Benelux B.V.

The DITABIS Aspiration Systems are made for the controlled aspiration of liquids from typical lab containers like cuvettes, tubes, microplates, petri dishes or roller bottles. They are also suited for the disposal of liquid biological or chemical waste and filtration of liquids by means of filter systems.

- Membrane vacuum pump
- 2L or 4L bottle incl. fast lock clutches, filter, ventilation insert and 3M silicone hose

Features AA series:
- Membrane vacuum pump turns on and off automatically
- AA 02/04 with 1 handle
- AA 24 with 4L bottle, 2 handles and Y connector
- Enlarge the automatic suction system by adding up to 4 working places and reduce your expenses for each user.

Features AC series:
- Membrane pump with manual switch-off
- 2L or 4L bottle

Features AZ series:
- Small membrane vacuum pump
- 2L or 4L bottle
- Bottle holder optional

Type	Description	Bottle size ml	Dimensions (W x D x H) mm	Pump cap. L/min / mbar	PK	Cat. No.
AA 02	automatic switch-on / switch-off	2000	160 x 230 x 470	17 / 100	1	**9.777 220**
AA 04	automatic switch-on / switch-off	4000	160 x 230 x 530	17 / 100	1	**9.777 221**
AA 24	automatic switch-on / switch-off	4000	160 x 230 x 530	17 / 100	1	**9.777 222**
AC 02	manually operated	2000	160 x 230 x 470	25 / 250	1	**9.777 223**
AC 04	manually operated	4000	160 x 230 x 530	25 / 250	1	**9.777 224**
AZ 02	manually operated	2000	85 x 165 x 65*	8 / 700	1	**9.777 225**
AZ 04	manually operated	4000	85 x 165 x 65*	8 / 700	1	**9.777 226**

*Pump dimensions

E & OE.

1 Accessories for Safety 2 suction systems

Hettich Benelux B.V.

Type	Description	PK	Cat. No.
AL 02	Spare bottle 2 litre, with fast locks in screw cap	1	**9.777 175**
AL 04	Spare bottle 4 litre, with fast locks in screw cap	1	**9.777 176**
AS 02	Safety bottle holder for 2 litre bottle, anosided aluminium	1	**9.777 178**
AS 04	Safety bottle Holder for 4 litre bottle, anosided aluminium	1	**9.777 179**
AW 01	Hose clip, in addition to the spare bottles	1	**9.777 177**
AV 03	Safety filter	1	**9.777 180**
AH 01	Handle with flow rate regulation, with adapter for pasteur pipettes, incl. 90° angled adapter	1	**9.777 181**
AR 40	Suction adapter with pipette tips, only for AH 01	1	**9.777 185**
AR 48	Adapter with suction rake, 8-channel, autoclavable, only for AH 01	1	**9.777 186**
AF 01	Foot-operated switch	1	**9.777 172**

1

BioChem-VacuuCenter BVC basic/control/professional

NEW!

VACUUBRAND

The compact BioChem-VacuuCenter offers the perfect solution for safe, sensitive and efficient aspiration of supernatants or filtration in all application areas.

- The BVC basic is designed for connection to an existing external vacuum source like a diaphragm pump or a vacuum network
- The BVC control and professional serve for efficient and convenient aspiration of supernatants. The vacuum level and thus the suction force is sensitively adjustable by the electronic touch panel and allows a delicate and reproducible operation. The chemically-resistant diaphragm vacuum pump is automatically turned on and off as needed, which is reducing the low noise level even further.
- The BVC professional, with 4L PP bottle with self-closing quick couplings minimises risks in transporting hazardous waste and in contamination of the workplace.
- All systems are available in two complete equipment options with different collection flasks and ready to accept a second aspiration hand controller (VHC) to support two users. The 2L borosilicate glass bottle (all types with "G" in the description) with a protective coating has a very high chemical resistance. For larger amounts of liquids the 4L bottle of unbreakable polypropylene (PP) is used.

Country specific power cable, please order separately.
Supply requirements: 230V 50/ 60Hz

2

9.882 228

3

9.882 229

Type	Pump Model	Dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
BVC basic	-	200 x 250 x 490	2.8	1	**9.882 225**
BVC basic G	-	180 x 230 x 430	2.8	1	**9.882 226**
BVC control	ME 1C	194 x 408 x 500	7.3	1	**9.882 227**
BVC control G	ME 1C	194 x 408 x 430	7.7	1	**9.882 228** 2
BVC professional	ME 1C	194 x 408 x 500	7.3	1	**9.882 229** 3
BVC professional G	ME 1C	194 x 408 x 430	7.7	1	**9.882 230**
Mains cable UK				1	**9.882 243**
Mains cable CH				1	**9.882 240**

4 Accessories for Biochem-VacuuCenter BVC basic/control/professional

NEW!

VACUUBRAND

Description	PK	Cat. No.
VHCpro VacuuHandControl handset	1	**6.260 677**
Stand for VHCpro suction handset	1	**6.260 678**
VHCpro Adapter for pipette tips with tip ejector	1	**4.652 758**
VHCpro 8-channel tip adapter with ejector	1	**6.266 573**
BVC Shuttle	1	**6.266 574**

4

1

9.867 732

2

9.867 733

CO_2 Incubators INCOmed

Memmert

For cell cultivation and for in-vitro fertilisation, the precision and reliability are of crucial importance. The classification as class IIa medical device confirms that the INCOmed models comply with the basic safety requirements of the European Medical Devices Directive 93/42/EEC.

Standard equipment

Ventilation and Control:
- uniform atmosphere and temperature distribution owing to enclosed non-turbulent ventilation system in working chamber
- adaptive, fuzzy-supported multifunctional digital microprocessor PID-controller
- integral fault diagnostics on temperature, CO_2 and humidity limit control
- 2 x Class A , 4-wire circuit, Pt100 sensors mutually monitoring and maintaining the performance at the same temperature value
- digital 7-day programme timer with real time clock, precise minute setting
- digital display (LED) of all set parameters, such as temperature, weekdays, time, CO_2, humidity and set-up values - language to be chosen in setup
- CO_2 supply via sterile filter
- digital electronic CO_2 control with automatic zeroing (infrared measuring system)
- CO_2-supply being interrupted upon door opening
- digital display of set and actual values (LED 0.1°C resolution) of temperature and CO_2-concentration
- integral humidity limit control (88 to 97%) with digital display of relative humidity - setting accuracy 1%
- non-volatile, programme memory
- chip card (STERICard) for sterilization of working chamber with fixed cycle (4 hours/160°C) without removal of sensors and mountings

Heating Concept:
- large-area multi-function heating system on four sides incl. additional door and back heating to avoid condensation
- incl. works calibration certificate for +37°C

Multiple Overtemperature Protection:
- with audible and visual alarm in case of over-/undertemperature and over-/under-CO_2,open door and empty gas cylinder
- independently working, digitally adjustable electronic overtemperature controller TWW protection class 3.1
- additional adjustable Auto-Safety-Function "ASF" for over- and undertemperature automatically following the set value at a preset tolerance range
- mechanical temperature limiter TB class 1 switching the heating off at approx. 10°C above max. oven temperature

Textured Stainless Steel Casing:
- fully insulated stainless steel door with double locking and 4-point adjustment
- inner glass door with opening (8mm dia.) to take gas samples
- zinc-plated, steel rear panel

Interior:
- easy-to-clean interior, made of stainless steel, reinforced by deep drawn ribbing, material no. 1.4301, hermetically welded

Temperature Range: from +20°C (however at least 8°C above ambient) up to +50°C
Power supply: 230V, 50/60Hz; 115 V, 50/60 Hz no extra cost

Type	Internal dimensions/housing (WxHxD) mm
INCO108med	560 x 480 x 400*/710 x 778 x 550**
INCO153med	480 x 640 x 500*/630 x 938 x 650**
INCO 246med	640 x 640 x 600*/790 x 938 x 750**

* Minus 25 mm for fan
** Depth without door handle, please add 38 mm

Type	Internal volume	Shelf support ribs	Shelves	Stainless steel water dishes	Rating	Weight	PK	Cat. No.
	litres				W	kg		
INCO108med basic model	108	4*	2*	1*	1000	70	1	**9.867 732** 1
INCO53med basic model	153	6*	3*	1*	1500	80	1	**9.867 733** 2
INCO246med basic model	246	6*	3*	2**	2000	110	1	**9.867 734**
INCO108med with Premium-Modul T5	108	4*	2*	1*	1000	70	1	**9.867 703**
INCO153med with Premium-Modul T5	153	6*	3*	1*	1500	80	1	**9.867 704**
INCO246med with Premium-Modul T5	246	6*	3*	2**	2000	110	1	**9.867 705**

*full width
**half width

E & OE.

Accessories for CO_2 Incubators INCOmed

Comfort module:
two gas connections with quick release connectors, automatic switch-over gas cylinders (impossible in combination with O_2 module)
Hygiene module:
electropolished interior, seamlessly welded by laser
Communication module:
USB interface, "Celsius" standard software for the control and logging of temperature, CO_2; O_2 (with O_2 module) and relative humidity; internal log memory 1024 kB as ring memory for all setpoint values, actual values, errors, settings with real time and date: logging approx. 3 months at 1 min. logging interval; parallel printer interface for all PCL3-compatible printers
CO_2 module:
extended CO_2 range from 0 to 20%
Premium module:
includes Comfort, Hygiene, Communication and CO_2 module (impossible in combination with O_2 module)
Humidity module:
active microprocessor control for humidifying and dehumidifying (40 - 97% rh), incl. digital indication and auto-diagnostic system; humidity supply with distilled water (from an external tank), dehumidifying via sterile filter; (standard humidity limit control and water dishes are omitted)
O_2 module:
control of oxygen concentration by N2 inlet, adjustment range 1% bis 20% O_2, setting accuracy 0.1%

Combination O_2 module with Comfort and Premium module impossible

1

Memmert

9.867 702

Type	Description	PK	Cat. No.
B00325 INCO108med	Additional stainless steel shelf, full width	1	**9.867 707**
B00321 INCO153med	Additional stainless steel shelf, full width	1	**9.867 708**
B03813 INCO246med	Additional stainless steel shelf, full width	1	**9.867 748**
B02787 INCO108med	Additional stainless steel shelf, full width	1	**9.867 709**
B02784 INCO153med	Additional water tray, full width	1	**9.867 710**
B02786 INCO246med	Additional water tray, half width	1	**9.867 711**
E02087	CO_2 Pressure reduction valve (DIN 8546), incl. gas-cylinder monitor	1	**9.867 755**
E06162	N_2 Pressure reduction valve (DIN EN ISO 2503) incl. gas-cylinder-bottle monitor, for O_2 module	1	**9.867 712**
B04459	HEPA Interior filter	1	**9.867 731**
E04337	Additional Steri-Card (only for interior-sterilization)	1	**9.867 702** 1
W6	RS232 interface instead of USB	1	**9.867 722**
T1	Comfort module for INCO108/153/246med	1	**9.867 735**
T2	Hygiene module for INCO108med	1	**9.867 736**
T2	Hygiene module for INCO153med	1	**9.867 737**
T2	Hygiene module for INCO246med	1	**9.867 738**
T3	Communication module for INCO108med	1	**9.867 739**
T3	Communication module for INCO153med	1	**9.867 740**
T3	Communication module for INCO246med	1	**9.867 741**
T4	CO_2 module for INCO108med	1	**9.867 742**
T4	CO_2 module for INCO153med	1	**9.867 743**
T4	CO_2 module for INCO246med	1	**9.867 744**
T5	Premium module for INCO108med	1	**9.867 745**
T5	Premium module for INCO153med	1	**9.867 746**
T5	Premium module for INCO246med	1	**9.867 747**
T6	O_2 module for INCO108, 153, 246med	1	**9.867 749**
K7	Active humidity control microprocessor for INCO108/153/246med	1	**9.867 706**
F7	Entry port in the rear, heated, with silicone stopper, 40 mm inner diameter	1	**9.867 750**

We can supply this manufacturer's whole product range !

partner of the LLG Lab Logistics Group

memmert
Experts in Thermostatics

1

1 CO_2 incubators, C Series

BINDER

The BINDER C is the fitting partner for routine applications for cell cultivation, contamination-free due to hot-air sterilisation at 180°C, reliable pH-stable thanks to the drift-free FPI infrared measuring system, high temperature precision with excellent dynamic and no risk of condensation even in high humidity.

Equipment:
- Air jacket system assuring temperature accuracy and excellent cell growth
- Temperature range from 7°C above ambient up to 50°C
- Water pan with built-in condensation control maintains dry interior walls
- Standard-compliant hot air sterilisation at 180°C (DIN 58947)
- Seamless deep-drawn inner chamber made of stainless steel with integrated shelf support system
- Drift-free infrared CO_2 measurement system
- Microprocessor with LED display for temperature and CO_2 concentration
- Independent temperature safety device class 3.1 (DIN 12880) with optical and audible temperature alarm
- Gas mixing head
- Interior volume 150L

Type	Description	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	PK	Cat. No.
C 150	right hinged door	500 x 500 x 600	680 x 815 x 820	1	**9.883 720**
C 150	left hinged door	500 x 500 x 600	680 x 815 x 820	1	**9.883 721**
2 C 150	incl. stacking adapter, right hinged door	500 x 500 x 600	680 x 815 x 1785	1	**9.883 722**
2 C 150	incl. stacking adapter, left hinged door	500 x 500 x 600	680 x 815 x 1785	1	**9.883 723**

2

2 CO_2 incubators, CB series with sterilizable sensor

NEW!

BINDER

- VENTAIR™ air jacket system
- Temperature range: 7°C above room temperature up to 60°C BINDER controller with LCD color display for simultaneous display of all important parameters (temperature, % CO_2, % O_2 concentration, humidity) and user-friendly push button/rotary knob
- Intuitive menu guidance
- Electronic chart recorder
- Variety of options for graphic display of process parameters
- Real-time clock
- **Standard-compliant hot air sterilization at 180°C with sterilizable built-in CO_2 sensor**
- Drift-free infrared CO_2 measurement system
- CO_2 introduction through patented gas mixing nozzle
- ANTI.PLENUM Design to avoid contamination of critical fixtures
- Permadry™, double pan humidification system with defined condensation site for condensate-free interior walls
- Seamless deep-drawn inner chamber made of stainless steel with round corners and integrated shelf support system
- Electronic error self-diagnostic system with visual and audible alarms, as well as potential-free contact for central monitoring
- Independent temperature safety device class 3.1 (DIN 12880) with visual and audible temperature alarm
- Tightly-fitted inner glass door made of safety glass
- Ethernet interface for communication software
- APT-COM™ DataControlSystem
- Three perforated shelves made of stainless steel
- Stackable units with new flat stacking adapter
- Door lock
- BINDER test certificate

Type	Internal volume litres	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
CB 60	53	580 x 550 x 720	400 x 330 x 400	60.00	1	**9.883 738**
CB 160	150	680 x 715 x 920	500 x 500 x 600	107.00	1	**9.883 739**
CB 220	210	740 x 715 x 1070	560 x 500 x 750	121.00	1	**9.883 740**
CB 60 UL	53	580 x 550 x 720	400 x 330 x 400	60.00	1	**9.883 741**
CB 160 UL	150	680 x 715 x 920	500 x 500 x 600	107.00	1	**9.883 742**
CB 220 UL	210	740 x 715 x 1070	560 x 500 x 750	121.00	1	**9.883 743**
CB 60*	53	580 x 550 x 720	400 x 330 x 400	60.00	1	**9.883 744**
CB 160*	150	680 x 715 x 920	500 x 500 x 600	107.00	1	**9.883 745**
CB 220*	210	740 x 715 x 1070	560 x 500 x 750	121.00	1	**9.883 746**
CB 60 UL*	53	580 x 550 x 720	400 x 330 x 400	60.00	1	**9.883 747**
CB 160 UL*	150	680 x 715 x 920	500 x 500 x 600	107.00	1	**9.883 748**
CB 220 UL*	210	740 x 715 x 1070	560 x 500 x 750	121.00	1	**9.883 749**

*gas tight, divided glass blind and divided drawers

E & OE.

1 Laminar Flow Clean Benches, Horizontal and Vertical Type Airstream®

1

Esco

Esco laminar flow clean benches are the premium selection for the discerning researcher, offering a combination of value, high quality construction, low operating noise levels, and a wide product range to suit all budgets, from the industry leader.

- Sentinel-Microprocessor maintains steady blower speed
- Airflow alarms
- Tempered glass side walls
- H14 HEPA filters providing superior product protection
- Pre-filter EU3
- Average Airflow Velocity (adjustable): 0.45m/s
- The air cleanliness within the work zone is better than ISO Class 5
- ISOCIDE™ antimicrobial coating on all painted surfaces minimizes contamination.

Standard equipment:
- 2 Electrical outlets
- Apparatus for UV lamp with timer (UV lamp and protective cover must be ordered separately)

More options, support stands on request.

Type	Size	External dimensions (W x D x H) mm	Description	PK	Cat. No.
Airstream® AHC-2D1	0.6m	730 x 797 x 1105	horizontal	1	**9.536 700**
Airstream® AHC-3D1	0.9m	1035 x 797 x 1105	horizontal	1	**9.536 701**
Airstream® AHC-4D1	1.2m	1340 x 797 x 1105	horizontal	1	**9.536 702**
Airstream® AHC-5D1	1.5m	1645 x 797 x 1105	horizontal	1	**9.536 703**
Airstream® AHC-6D1	1.8m	1950 x 804 x 1175	horizontal	1	**9.536 704**
Airstream® AVC-2D1	0.6m	730 x 770 x 1250	vertical	1	**9.536 705**
Airstream® AVC-3D1	0.9m	1035 x 770 x 1250	vertical	1	**9.536 706**
Airstream® AVC-4D1	1.2m	1340 x 770 x 1250	vertical	1	**9.536 707**
Airstream® AVC-5D1	1.5m	1645 x 770 x 1250	vertical	1	**9.536 708**
Airstream® AVC-6D1	1.8m	1950 x 770 x 1250	vertical	1	**9.536 709**

2 Microbiological Safety Cabinets, Class II, Type eSafe®

2

Esco

The new eSafe® combines all features of the approved Infinity® with the latest technology and design. Class II according to DIN EN 12469.
- Optimized proportion.
- Energy-saving: just 190W in operation, 100W in stand-by mode.
- Low noise emission: 50.05dBA
- Ergonomically angled and motorized front sash for one hand operation
- Tempered glass side panels
- Large display to control all parameters in the field of view
- Esco triple-wall design with negative pressure prevents the possibility of contamination from leaks.
- Dual fan design for guaranteed safety
- The interior sides and back wall are formed from a single piece of stainless steal.
- Multi-piece work surface removal simplifies cleaning
- Esco ISOCIDE™ antimicrobial coating on all painted surfaces minimizes contamination.
- Sentinel-Platinum controller maintains steady blower speed
- Certified according to EN 12469 by TÜV-Nord, Germany
- Connector for HPV decontamination

Standard equipment:
- 4 electrical outlets
- UV lamp with timer

More options, support stands, installation on request.

Type	Size	External dimensions (W x D x H) mm	PK	Cat. No.
eSafe® EC2-4L8	1.2 m	1340 x 790 x 1450	1	**9.536 762**
eSafe® EC2-5L8	1.5 m	1645 x 790 x 1450	1	**9.536 763**
eSafe® EC2-6L8	1.8 m	1950 x 790 x 1450	1	**9.536 764**

1

1 Microbiological Safety Cabinets, Class II, Type NordicSafe®

Esco

One of the silent Biological Safety Solutions from Esco.
Class II according to DIN EN 12469.
- Noise emission <51 dBA.
- Best comfort and safety at a favourable price.
- Esco triple-wall design with negative pressure prevents the possibility of contamination from leaks.
- Ergonomically angled and motorized front sash for one hand operation
- A large easy-to-read digital display and ergonomically sized touchpad.
- Tempered glass side panels
- Sentinel-Gold-controller maintains steady blower speed
- Sleep mode with 50% reduced power to save energy, to maintain safety
- Esco ISOCIDE™ antimicrobial coating on all painted surfaces minimizes contamination.
- Certified according to EN 12469 by TÜV-Nord, Germany

Standard equipment:
- 2 electrical outlets
- UV lamp with timer

More options, support stands, installation on request.

Type	Size	External dimensions (W x D x H) mm	PK	Cat. No.
NordicSafe® NC2-4L8	1.2 m	1200 x 812 x 1410	1	**9.536 760**
NordicSafe® NC2-6L8	1.8 m	1800 x 812 x 1410	1	**9.536 761**

2

2 Microbiological Safety Cabinet, class II Type Airstream®

Esco

The Industry's Most Energy Efficient Class II Cabinet.
Class II according to DIN 12469.

- Ergonomically angled and frameless front sash
- A large easy-to-read digital display and ergonomically sized touchpad.
- Tempered glass side walls
- Esco triple-wall design with negative pressure prevents the possibility of contamination from leaks.
- HEPA filter (H14) for long lifetime
- ISOCIDE™ antimicrobial coating on all painted surfaces minimises contamination.
- Quickstart Mode
- Sentinel-Microprocessor maintains steady blower speed
- RS232 serial interface port
- More options on request, e.g. prefilter at intake socket

Other varieties:
- Airstream G with Dual-Exhaust Filters (2 x HEPA), better protection
- Airstream G with Dual-Exhaust Filters (1 x HEPA, 1 x Activated carbon), for additional chemical protection

Standard equipment:
- 2 Electrical outlets
- UV Lamp with timer

Without support stand.
More options and support stands on request.

Type	Size	External dimensions (W x D x H) mm	PK	Cat. No.
Airstream E AC2-2E8	0.6 m	730 x 810 x 1400	1	**9.536 710**
Airstream E AC2-3E8	0.9 m	1035 x 810 x 1400	1	**9.536 711**
Airstream E AC2-4E8	1.2 m	1340 x 810 x 1400	1	**9.536 712**
Airstream E AC2-5E8	1.5 m	1645 x 810 x 1400	1	**9.536 713**
Airstream E AC2-6E8	1.8 m	1950 x 810 x 1400	1	**9.536 714**
Airstream G AC2-4G8*	1.2 m	1340 x 810 x 1400	1	**7.939 057**
Airstream G AC2-6G8*	1.8 m	1950 x 810 x 1400	1	**7.939 058**

*with additional HEPA exhaust filter, optional with charcoal filter

Microbiological Safety Cabinet, class II, acc. to DIN 12469, Type Airstream® Plus

NEW!

1

Esco

- Certified according to EN 12469 by TÜV-Nord, Germany
- Ergonomically angled and motorized front sash for one hand operation (aerosol tight gasket)
- Dual Energy efficient DC ECM motor
- Sentinel-Gold-controller maintains steady blower speed
- Tempered glass side panels at E-Series, stainless steel side walls at S-Series
- LED lamp
- Esco triple-wall design with negative pressure prevents the possibility of contamination from leaks
- Multi-piece work surface removal simplifies cleaning at E-Series, single piece work surface with sink at S-Series
- HEPA filter (H14) for long lifetime
- Esco ISOCIDE™ antimicrobial coating on all painted surfaces minimizes contamination
- Quickstart Mode
- RS232 serial interface port
- More options on request (prefilter, RS485 serial interface port for using Voyager Software)

Standard equipment:
- 2 Electrical outlets
- UV lamp with timer

Without support stand.
More options, support stands IQ/OQ or KI DISCUS test on request.

9.536 724

Type	Size	External dimensions (W x D x H) mm	PK	Cat. No.
Airstream® Plus E	1.2m	1340 x 823 x 1400	1	**9.536 724** 1
Airstream® Plus S	1.2m	1340 x 823 x 1400	1	**9.536 725**
Airstream® Plus E	1.5m	1645 x 823 x 1400	1	**9.536 726**
Airstream® Plus S	1.5m	1645 x 823 x 1400	1	**9.536 727**
Airstream® Plus E	1.8m	1950 x 823 x 1400	1	**9.536 728**
Airstream® Plus S	1.8m	1950 x 823 x 1400	1	**9.536 729**

2 MSC-Advantage™ Class II Biosafety Cabinets

2

Thermo Scientific

Thermo Scientific biological safety cabinets combine smart design and extraordinary value with best-in-class energy efficiency, reliability and usability. The MSC-Advantage is designed to meet the stringent safety requirements of EN 12469:2000 and EN 61010-1:2001, and carries the NF Mark as well as the test report from the Health Protection Agency (HPA) from Porton Down, UK.
- 60% less energy consumption than competing AC motor-driven cabinets
- 60% less heat emission than competing AC motor-driven cabinets
- Extremely low noise level (54 or 59 dB(A)) for a more comfortable work environment
- Largest work surface area of any cabinet (more workspace for your research)
- Cleaning position of window (patented feature that allows user to clean the entire window)
- Sloped front window for improved ergonomics (more comfortable working position)
- Motor operates at reduced speed when front window is closed (keeps interior cleaner for faster set up each day and eliminates noise into the lab when not in use)
- Low overall height to fit into labs with shorter ceilings
- Supply/exhaust air filter: HEPA H 14 EN 1822, 99.999% at 0.3 µm particle size
- Additional exhaust filter option (AEF): HEPA H 14 EN 1822, 99.999% at 0.3 µm particle size
- Voltage: 230 V, 50/60 Hz

Description	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
MSC Advantage 0.9	1000 x 800 x 1522	900 x 630 x 780	170	1	**4.010 047**
MSC Advantage 1.2	1300 x 798 x 1550	1200 x 495 x 780	240	1	**6.235 767**
MSC Advantage 1.5	1600 x 800 x 1522	1500 x 630 x 780	230	1	**4.010 048**
MSC Advantage 1.8	1900 x 798 x 1550	1800 x 495 x 780	340	1	**4.010 033**

Accessories for MSC-Advantage Microbiological Safety Cabinets Class II

Thermo Scientific

Description	PK	Cat. No.
Standard floor stand, 750mm height for 1.8M cabinet	1	**4.009 986**
Manual Adjustable stand, 1.2M cabinet, 750-950mm in 50mm increments	1	**4.009 987**
Manual Adjustable stand, 1.8M cabinet, 750-950mm in 50mm increments	1	**4.009 988**
Electric Adjustable stand, 750-950mm height for 1.2M cabinet	1	**4.009 989**
Electric Adjustable stand, 750-950mm height for 1.8M cabinet	1	**4.009 990**
Vacuum tap 3/8 connection	1	**4.009 992**
UV Light Option, Field Installed	1	**4.010 001**
UV Light Option, Factory Installed	1	**4.010 098**
Standard floor stand, 750mm height for 1.2M cabinet	1	**6.241 502**
Solenoid valve for combustable gas tap	1	**9.536 550**
Water tap H2O 3/8 connection	1	**9.536 551**
Non-combustible gas 3/8 tap with long neck for installation in side walls	1	**9.536 552**
Tap for flammable gas cylinders 3/8 connection	1	**9.536 553**

1 Microbiological Safety Cabinet BSC-700II

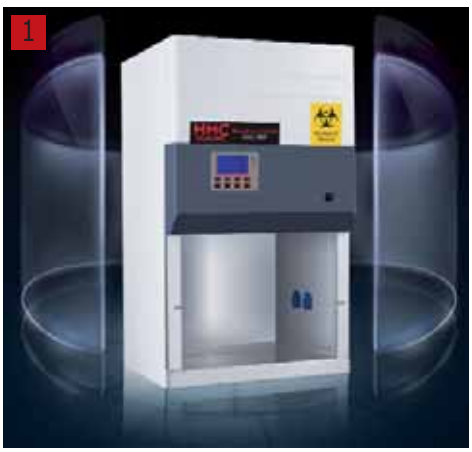
HMC-EUROPE

This miniature Class 2 safety workbench offers security on a minimum of space.
The protection of the user as well as the safety of the samples is ensured by the two HEPA filters with an efficiency of 99.995% at 0.3 microns. An air-flow gauge (velometer) monitors the speed of air at the front and will activate an alarm (audiovisual), if the fan malfunctions. The unit may be placed on a desk without any problems, optional with mobile base frame available.
Standard features:
- Electrical sliding window
- UV light, to be positioned freely
- 2 sockets, can be disconnected from outside
- Electronically controlled air stream
- Automatic readjustment of fan
- Stainless-steel working surface
- Quiet fan drive with low vibration
- Digital air flow indication
- Main switch as key-operated switch
- Option: Stainless steel base frame with 4 castors (2 castors are lockable)

Specifications

External dimensions (WxDxH):	700 x 650 x 1230mm
Working area dimensions (WxDxH):	600 x 500 x 540mm
Material front sash:	Multi-layer toughend glass
Material working area:	SUS 304 stainless steel
Clean level:	Class 10
Noise level:	65dB
Vibration:	≤5µm
Power requirements:	AC 230/V 50Hz
Power consumption:	800W
Light:	>680lux
Safety standard:	EN 12469

Type	PK	Cat. No.
BSC-700II	1	**9.536 800**
Rack on wheels for BSC-700II	1	**7.629 781**



E & OE.

1 LLG-Petri dishes, Soda-lime glass

Ext. diam. mm	Height mm	PK	Cat. No.
40	12	1	**9.170 570**
60	15	1	**9.170 571**
80	15	1	**9.170 572**
90	15	1	**9.170 575**
100	10	1	**9.170 573**
100	15	1	**9.170 574**
100	20	1	**9.170 576**
120	20	1	**9.170 577**
150	25	1	**9.170 578**
180	30	1	**9.170 579**
200	30	1	**9.170 580**
200	50	1	**9.170 581**

2 Petri dishes, Soda-lime glass

NEW!

Steriplan®. Hydrolytical class 3. *DURAN Group*

Ext. diam. mm	Height mm	PK	Cat. No.
40	12	10	**9.170 462**
40	12	1	**9.170 401**
60	15	10	**9.170 463**
60	15	1	**9.170 417**
80	15	10	**9.170 464**
80	15	1	**9.170 432**
100	15	10	**9.170 465**
100	15	1	**9.170 442**
100	20	10	**9.170 466**
100	20	1	**9.170 443**
120	20	10	**9.170 467**
120	20	1	**9.170 448**
150	25	1	**9.170 451**
180	30	1	**9.170 456**
200	30	1	**9.170 460**
200	45	1	**9.170 461**

3 Petri dishes, DUROPLAN®, borosilicate glass 3.3

DURAN®. With lid.Petri dishes are manufactured in a special production process which results in an even media dispersion and a uniform cell growth. Bottom and lid are absolute planar and free from bubbles and cords. *DURAN Group*
Glass Type I/neutral glass as per USP, EP and JP. Autoclavable. DIN 13132.

Ext. diam. mm	Height mm	PK	Cat. No.
60	20	1	**9.170 141**
80	20	1	**9.170 143**
100	15	1	**9.170 146**
100	20	1	**9.170 148**
120	20	1	**9.170 151**
150	30	1	**9.170 153**

4 Petri dishes, PS

Non-sterile. For bacteriology. With or without vents. In light or heavy duty versions. *Greiner Bio-One*

Ext. diam. mm	Height mm	Vents	Version	PK	Cat. No.
35	10	With	Light	740	**9.408 035**
60	15	With	Light	600	**9.408 040**
94	16	Without	Light	480	**9.408 094**
94	16	Without	Heavy	480	**9.408 047**
94	16	With	Light	480	**9.408 095**
94	16	With	Heavy	480	**9.408 045**
100	15	With	Light	420	**6.077 283**
100	20	With	Light	360	**6.510 005**
145	20	With	Light	120	**6.052 085**

Foils please see page 181.

1 Petri Dishes, PS

Thermo Scientific

Suitable for culturing of fungi, bacteria and other microorganisms. Contact dish (with grid) useful for sampling in hospital environments (for research use only), as well as in the food science and the pharmaceutical industry. All dishes perform well in automatic dispensers due to complete flatness and uniform height.
Material: Polystyrene

Ext. diam.	Height	Capacity	Working volume	Culture surface	Sterile	PK	Cat. No.
mm	mm	ml	ml	cm²			
140	20	250.0	35	145.0	yes	80	**4.008 582**
100	15	68.0	12.5	58.0	yes	320	**6.223 201**
67	15*	7.7	6	25.0	yes	396	**6.052 163**

* contact bowl with grid

2 Nutrient pads

Sartorius

Sterile, dehydrated culture media pads in petri dishes. Once they are moistened with 3.0ml to 3.5ml of sterile and demineralised (or distilled) water they are ready-to-use immediately. All Nutrient Pad sets are supplied with the appropriate membrane filters, which are also individually sterile packed. Shelf life of the NPS 18 to 24 months at room temperature. Alternative nutrient media are available on request.

Type	For	Colour	Pore size µm	PK	Cat. No.
Azide	Enterococci	Green / green	0.45	100	**9.055 006**
Endo	E. coli + Coliforms	White / green	0.45	100	**9.055 008**
Caso	Colony count	Green / green	0.45	100	**9.055 017**
Standard TTC	Colony count	Green / green	0.45	100	**9.055 010**
Tergitol TTC	E. coli + Coliforms	White / green	0.45	100	**9.055 011**
Chapman	Staphylococci	White / green	0.45	100	**9.055 032**
Wort	Yeasts and moulds	Grey / white	0.65	100	**9.055 013**
ECD	E. coli	White / green	0.45	100	**9.055 025**
VLB S7-S	Pediococci and Lactobacilli	White / green	0.45	100	**9.055 014**
Caso	Colony count	Green / green	0.45	100	**9.055 018**
Glucose-Tryptone	thermophilic spore formers, mesophilic bacteria	White / green	0.45	100	**9.055 020**
M-FC	E. coli + Coliforms	White / green	0.45	100	**9.055 022**
Tomato juice	Leuconostocoenos	Green / green	0.45	100	**9.055 026**
Lysin	wild yeasts	Grey / white	0.65	100	**9.055 015**
Sabouraud	Yeast + mould	Grey / green	0.65	100	**9.055 023**
Mac Conkey	Enterobacteria	White / green	0.45	100	**9.055 027**
Cetrimide	Pseudomonas	White / green	0.45	100	**9.055 031**
Schaufus Pottinger	Yeast + mould	White / green	0.65	100	**9.055 034**
Yeast extract	Colony count	Green / green	0.45	100	**9.055 037**
*Schaufus Pottinger	Yeasts and moulds	White / green	1.20	100	**9.055 028**
Weman	Mesophilic slime-forming bacteria	Green / green	0.45	100	**9.055 019**
Bismuth sulphite	Salmonellae	Green / green	0.45	100	**9.055 012**

* also available in 1.2µm (white/green), 0.8µm (grey/white) and 0.65µm (white/green) versions.

9.908 127

Petri dish holder

Constructed in steel wire, as outlined below. Suitable for dish diameters of 100mm, Internal diameter approx. 102mm, Internal height approx. 230mm. For approx. 10 petri dishes.

Description	PK	Cat. No.
Electropolished, grade 1.4301 stainless steel	1	**9.908 127**
White nylon-coated	1	**9.908 128**

E & OE.

1 Petri dish stands, adjustable, ABS

This adjustable dispenser neatly and safely holds 15 Petri dishes up to 102mm. Slides open at the base for easy refilling. Rugged ABS plastic. Extends from 127 to 210mm.

Bel-Art Products

Width mm	Length mm	Height mm	PK	Cat. No.
89	210	210	1	**9.170 100**

2 Anaerobic jars, stainless steel

schuett-biotec

For the cultivation of anaerobic and microaerophilic microorganisms in a defined and rapidly generated gas atmosphere.The requested atmosphere may be reached under ideal conditions by two methods. Either by using chemical gas packs (anaerobe systems) or by manually evacuating the jars with a vacuum pump and flushing with gas afterwards (e.g. with nitrogen), in this case no chemical accessories are needed (except anaerobic jar eco). The jars are made of robust stainless steel or transparent PC.The lids are made of UV-resistant plastic or transparent polycarbonate with two corner valves incl. tube clips for vacuum hoses (5 mm i.d.) and with manometer for exact control of the vacuum or overpressure from -1 to 0.2 bar (except anaerobic jar eco). On request, the lids are available as custom-made versions, e.g. made of other material, without valves and manometer or equipped with high-temperature manometer. The optional racks are made of stainless steel providing holders for comfortable operation of the anaerobe systems.

Methods for reaching anaerobic conditions:
3 x times evacuating and filling gas, flushing with gas for 5 minutes and chemical gas production (GasPacks) for Anaerobic jars "small", "standard", "large" and "crystal". For Anaerobic jar "eco" flushing with gas for 5 minutes (Using GasPack-Kits).

Type	To hold dishes quantity	Int. diam. mm	Int. height mm	Capacity litres	Figure	PK	Cat. No.
Anaerobic jar "small"*	10 (60 to 100mm dia.)	120	170	2	a	1	**9.520 051**
Anaerobic jar "standard"*	15 (60 to 100mm dia.)	120	270	3	b	1	**9.520 056**
Anaerobic jar "large"*	15 (up to 150mm dia.)	175	260	6	c	1	**9.520 050**
Anaerobic jar "eco"**	15 (60 to 100mm dia.)	120	270	3	d	1	**9.520 057**
Anaerobic jar "crystal"***	15 (60 to 100mm dia.)	120	270	3	e	1	**9.520 058**
Rack "small" (for all Anaerobic jars)	10 (60 to 100mm dia.)					1	**9.520 059**
Rack "standard" (for "standard", "large", "eco", "crystal")	15 (60 to 100mm dia.)				f	1	**9.520 053**
Rack "150" (for "large")	15 (up to 150mm dia.)					1	**9.520 060**
Rack "3 x 60" (for "large")	45 (60mm dia.)					1	**9.520 061**
Rack "micro" (for "large")	for multiwell plates					1	**9.520 062**
Test tube holder (for all Anaerobic jars)	for 9 test tubes (18mm dia.)					1	**9.520 063**
GAS-Pack-Kit "anaerobic" (1 x 3.5 l)						10	**9.520 064**
GAS-Pack-Kit "CO2" (1 x 2,5 l)						10	**9.520 065**
GAS-Pack-Kit "microaerophil" (1 x 3,5 l)						10	**9.520 066**
Anaerobiose Indicator (test strip)						100	**9.520 067**

*Stainless steel jar with UV-resistant plastic lid (2 valves, 1 manometer)
**Stainless steel jar with UV-resistant plastic lid (ventilation screw)
***Transparent polycarbonate jar and lid (2 valves, 1 manometer)

3 LLG-Dry swabs, sterile

Description	Ext. diam. mm	Length mm	PK	Cat. No.
with Cotton tip and wooden stick, in PP test tube	12	150	400	**9.404 002**
with Rayon tip and plastic stick, in PP test tube	12	150	400	**9.404 003**
with Cotton tip and wooden stick, individually wrapped		150	1000	**9.404 004**
with Rayon tip and plastic stick, in PP test tube, individually wrapped	12	150	150	**9.404 005** 1
with Rayon tip and plastic stick, individually wrapped		150	1000	**9.404 006** 2
with clear Amies medium, Rayon tip and plastic stick, in PP test tube	12	150	150	**9.404 007**
with clear Amies medium with Charcoal, Rayon tip and plastic stick, in PP test tube	12	150	150	**9.404 008**

1

9.404 005

2

9.404 006

3

4

4 Swabs, plain, culture, cotton/wood

Disposable cotton swab on wooden stick. Length 150mm. With labelled outer storage tube. Sterile and individually packed.

Type	PK	Cat. No.
Swabs, plain, culture	300	**9.404 001**

5

5 Cotton Applicator

Ideal for sampling in laboratories

9.413 160: non-sterile, according to EN ISO 13485
9.413 161: sterile, according to EN ISO 13485 and conforming to 93/42/EEC, enclosure V for medical products, sterilised with ETO gas

Material	Wall thickness mm	Length mm	Head size	Sterile	Package	PK	Cat. No.
Wood	2.2	150	4 to 5.5 mm diam.	no	bag	100	**9.413 160**
Wood	2.2	150	Ø 4 to 5.5 mm	yes	single, Peel-Pack	100	**9.413 161**

6

7

6 7 Inoculating needles smartPicks®, wood

Heathrow Scientific

Available in three lengths and two needle sizes to suit a wide range of application needs.
The Mini fits neatly into a 1.5 mL microfuge tube allowing the lid to be closed for full sample transfer/recovery.
- Naturally biodegradable White Birch wood
- Manufactured in an FDA-registered factory and complies with FDA standards for food contact
- Autoclavable and available in semi or needle point styles for delicate operations

Type	Description	PK	Cat. No.
smartPicks® Mini	Semi point, for 1.5ml tubes	2000	**6.257 176**
smartPicks® Mini	Needle point, for 1.5ml tubes	2000	**6.257 177**
smartPicks® Standard	Semi point, single tip	1600	**6.257 178**
smartPicks® Standard	Needle point, single tip	1500	**6.257 179**
smartPicks® Large	Semi point, single tip	500	**6.257 180**
smartPicks® Large	Needle point, single tip	500	**6.257 181**

Absorbent pads - please see page 1071.

E & OE.

1 Picking-Tool schuett PickMaxX II

NEW!

schuett-biotec

The schuett PickMaxX Picking-Tool is a handheld device for manually transferring cell colonies to multiwell plates as well as a manually operated inoculating device. Unerring picking, even for specific individual colonies:
- High working efficiency compared to using toothpicks
- Low-cost version of a picking robot
- Immediate intuitive operation
- Easy, rapid handling

Simultaneously 12 clones may be transferred to the buffer solution (suitable for 96-multiwell plates). Compared to individually picking single colonies (toothpick) from a Petri dish and transferring them to standard multiwell plates, the PickMaxX II may pick up to 12 colonies in a row and transfer them all at the same time to the 96-multiwell plate. This highly increases the efficiency of the process as well as the throughput. Sterile disposable foil combs are used for picking cell colonies (96-size). It takes approx. 5 minutes to inoculate a complete 96-multiwell plate. Quick screens in-between are possible. No setup time required as compared with a picking robot. The PickMaxX II is useful in bridging servicing times of a picking robot.

1

Type	PK	Cat. No.
schuett PickMaxX II Picking-Tool	1	**6.266 801**
schuett PickMaxX II Combs 96-size, sterile (Packs of 8 combs each)	10	**6.266 802**

2 3 4 LLG-spatulas, sterile

NEW!

Ideal for the uniform spreading of cell cultures and liquids
- Smooth , rounded surfaces for uniform spreading without scratching the agar surface
- Ethylene oxide sterilized
- Sterile, 10 per bag or individually packed
- Autoclavable

Description	Material	Length mm	Width mm	Package contents	PK	Cat. No.
LLG - Spatula, L-shaped, blue, sterile	ABS	156	38.0	50 x 10	500	**6.265 638**
LLG - Spatula, L-shaped, blue, sterile	ABS	156	38.0	individually packed	500	**6.265 639**
LLG - Spatula, T-shaped, blue, sterile	ABS	140	34.0	50 x 10	500	**6.265 640**
LLG - Spatula, T-shaped, blue, sterile	ABS	140	34.0	individually packed	500	**6.265 641**
LLG - Spatula, Delta-shaped, blue, sterile	PP	208	30.0	100 x 10	1000	**6.265 642**

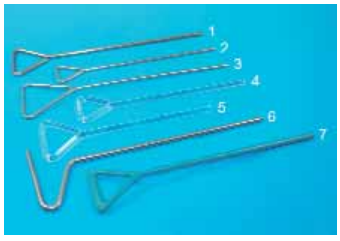
2

3

4

5 LLG-Drigalski spatulas

5



For easy plating.

Material	Diam. mm	Length mm	Width mm	Figure	PK	Cat. No.
Stainless steel 18/10	4	190	40.0	1	1	**9.197 490**
Wironit, CrNi 18/12, straight	3	150	24.5	2	1	**9.197 496**
Wironit, CrNi 18/12, angular 10°	3	190	45.0	3	1	**9.197 497**
Borosilicate glass 3.3	5	150	30.0	4	1	**9.197 499**
Glass inoculation spreader	5	145	40.5	5	1	**9.520 206**
Stainless steel inoculation spreader	4	185	57.0	6	1	**9.520 205**
PS, sterile	4	174	51.5	7	100	**6.251 768**

6 Inoculating Turntable

NEW!

Bel-Art Products

Manually operated turntable creates virtually concentric circles of uniformly spread out bacterial colonies. This turntable can hold various sizes of Petri dishes 60, 90, 100mm.
Ball bearings provide a steady, even, and prolonged spin time resulting in a rapid inoculation step and extended operating life.
Equally allocate bacteria across Petri Dishes with ease
- Ball bearings assure simple and graceful spinning
- Lightweight, non-skid, durable and portable
- Polypropylene construction

Diameter: 127mm
Height: 50mm
Weight: 0.4 kg

6

Description	PK	Cat. No.
Inoculating Turntable	1	**9.520 530**

1

1 Petri dish turntables, schütt Petriturn

NEW!

For uniform inoculation of petri dishes. Easy-to-use.

schütt petriturn-M
With manually operated, heavy turntable for smooth and long-lasting rotation. Double-sided construction accommodates two sizes of petri dish (90mm or 150mm diameter), by inverting the turntable.

schütt petriturn-E
Electrically driven, infinitely adjustable, constant speed rotation from 10 to 120 rpm. Permanent operation, or optionally a footswitch can be connected. 12V d.c., 5W power supply requiring 100 - 240V 50/60Hz (115V optional).

Type	Dimensions mm	Figure	PK	Cat. No.
schuett petriturn-M, manually driven	(Dia. x H) 160 x 45	1	1	**9.520 201**
schuett petriturn-E, electrically driven	(Dia. x H) 160 x 70	2	1	**9.520 200**
Foot pedal for schuett petriturn-E			1	**9.520 203**
Turntable adapter for Petri dishes up to 150mm diameter			1	**9.520 204**
Glass inoculation spreader	(W x D) 180 x 58	3	1	**9.520 206**
Stainless steel inoculation spreader	(W x D) 145 x 40	4	1	**9.520 205**

2

2 LLG-Inoculation loops, PS, sterile

Inoculation loops "plastic" are made of flexible polystyrene. They have ultra-smooth loops and offer problem free planting and streaking of cultures.
Free of lubricants, oils and electrostatic charges, enabling consistent wetting and complete liquid transfer. Loops do not cut or gouge the agar surface during streaking. Ergonomic design of the loop handle improves grip due to the large handle and assists orientation. When viewed in cross section, the shafts of the loops have a hexagonal shape which creates a handle with six flat surfaces. This design facilitates maximum grip and easy orientation of the loop head. The needle end for colony counting is also a perfect tool for picking off individual isolated colonies. They are also suitable for making stab inoculations into agar slants or tubes of solid culture medium.
Package: 10 bags of 10 pieces

Type	Capacity µl	PK	Cat. No.
Needle / loop	1	100	**9.160 041**
Needle / loop	10	100	**9.160 042**
Loop / loop	1 / 10	100	**9.160 043**

3

3 Inoculation loops Wironit

Wironit. CrNi 18/12. *Hammacher*

Diam. mm	Length mm	PK	Cat. No.
1.5	50	1	**9.160 057**
2.0	50	1	**9.160 056**
2.5	50	1	**9.160 058**
4.0	50	1	**9.160 055**
1.5	60	1	**9.160 061**
2.5	60	1	**9.160 062**
4.0	60	1	**9.160 063**

4

4 Inoculating loops and needles, PS

Radiation-sterilised. Semi-quantitative standard for sample handling, e.g. for diseases of the urinary tract. Surface treated to increase drop adhesion. Reduced contamination risks as product is disposable and does not require flaming. *Thermo Scientific*

Type	Capacity µl	PK	Cat. No.
Blue loop	10	50	**9.405 410**
Colorless loop	1	50	**9.405 401**
Yellow needle	--	50	**9.405 400**

Other colours on request

E & OE.

1 2 3 Inoculation loops "metal" and loop stands

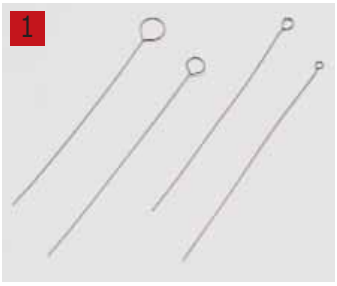
Inoculation loops made from stainless steel, special stainless steel wire or platinum-iridium wire (90/10). Can be heated to red heat. *schuett-biotec*
Length: 60mm. Wire diameter: 0.5mm.

Inoculation loop holder according to Kolle for 0.3 to 0.7mm wire diameter.

Inoculation loop stand robust and sturdy made of plastic (autoclavable). Accomodate up to 6 inoculation loop holders at any one time.

Type	Description	Loop diam. mm	PK	Cat. No.
P-I 1	Platinum-iridium	1	1	**9.520 180**
P-I 2	Platinum-iridium	2	1	**9.520 181**
P-I 3	Platinum-iridium	3	1	**9.520 182**
P-I 5	Platinum-iridium	5	1	**9.520 184**
E 1	Stainless steel, special wire	1	10	**9.520 170**
E 2	Stainless steel, special wire	2	10	**9.520 171**
E 3	Stainless steel, special wire	3	10	**9.520 172**
E 5	Stainless steel, special wire	5	10	**9.520 174**
W-1.5	Stainless steel	1.5	10	**9.520 185**
W-2.5	Stainless steel	2.5	10	**9.520 186**
W-4.0	Stainless steel	4.0	10	**6.233 696**
Inoculation loop holder	160 mm long		1	**9.520 178**
Inoculation loop stand R (round)	(Diam. x H) 80 x 50mm		1	**9.520 190**
Inoculation loop stand L (long)	(L x W x H) 180 x 50 x 50mm		1	**9.520 191**

1



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3

4 Inoculation loops, platinum-iridium

Platinum-iridium wire 90/10.
0.5mm thick.

Type	Diam. mm	PK	Cat. No.
without glass rod	3	1	**9.160 050**
without glass rod	2	1	**9.160 052**
fused into glass rod	3	1	**9.160 053**
fused into glass rod	2	1	**9.160 054**

4

5 Platinum-iridium wire

Platinum-iridium 90/10 wire available in different diameters.
Sold per cm.

Diam. mm	PK	Cat. No.
0.2	1	**9.160 702**
0.3	1	**9.160 703**
0.4	1	**9.160 704**
0.5	1	**9.160 705**
0.6	1	**9.160 706**
0.8	1	**9.160 708**
1.0	1	**9.160 710**

5

Bunsen burners please see page 130.

1 Loop Sterilizer SteriMax smart

NEW!

WLD-TEC

IR-HotSpot Technology: High-Speed Annealing and Sterilizing the Smart Way.

Smart Infrared Light - Instantly Ready to Work
Specifically focused infrared light generates an IR-HotSpot in which your inoculation loop is sterilized at temperatures from 750 to 1000°C after only 5 to 10 seconds. It is immediately ready to use, without any unnecessary warm-up period. Our highly sophisticated annealing tube is based on many years of experience. It is made of special quartz glass. The tube is closed at one end preventing any risk of contamination with pathogens. The annealing tube can be slid out in a matter of seconds for easy cleaning.

Smart Operation - Touchless Working
Touchless IR-Sensor technology starts each sterilization process automatically. Adjustable timers signal both the completion of sterilization and cooling via the display and an audible signal. Both timers can be adjusted and recalled individually and up to the second for two users by gently touching the panel.

Smart Use of Power - Minimum Heat Dissipation
'Thermocontrol' is the key element for an efficient use of power. It allows for quick softstart of the infrared light, a short heating period and the re-use of residual heat for the next sterilization process. Whenever you pause, your energy consumption and heat dissipation will pause as well.

Smart Design - with Touch panel
SteriMax smart comes in an elegant stainless steel housing with a touch safety glass control panel designed for extreme laboratory environments.

Advantages:
- Instantly ready to work without any unnecessary warm-up
- Auto-Start through touchless IR-Sensor technology
- Adjustable sterilization and cool-down timers for two users
- Touch operation
- Annealing tube made of special quartz glass
- Simple cleaning of the device and the annealing tube

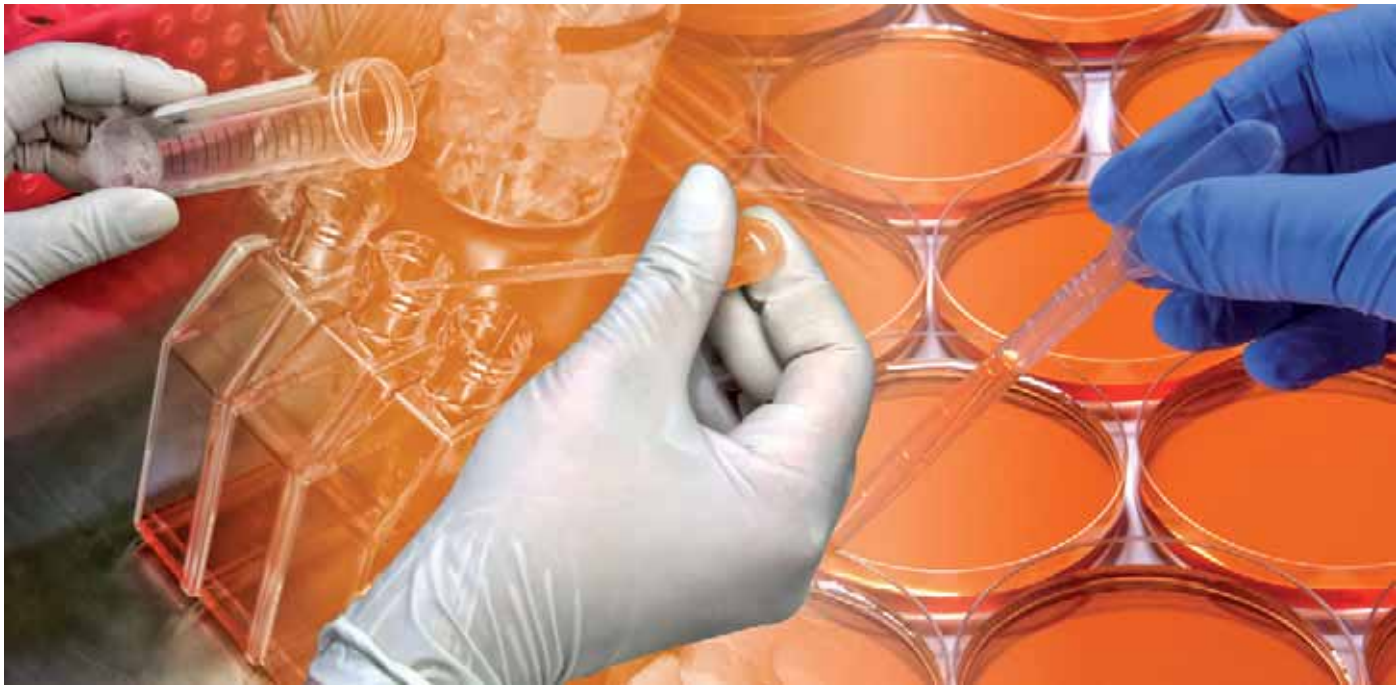
Supplied with: SteriMax smart incl. quartz glass annealing tube, inoculation loop holder with inoculation loop, diam. 3mm, holding device for 3 inoculation loop holders.

1

Specifications

Dimensions (WxDxH):	110 x 170 x 180mm
Power supply:	220 - 240V, 50/60Hz
Protection class:	IP 20

Type	PK	Cat. No.
Loop Sterilizer SteriMax smart	1	**6.261 507**
Quarz glass annealing tube	1	**6.261 508**



E & OE.

Safety Laboratory Gas Burners Fuego SCS series

WLD-TEC

Suitable for all flame related applications in the laboratory. The low profile body facilitates ergonomic operation; the streamlined design reduces air flow disturbances in a clean room workbench. The Fuego SCS series can be operated with foot pedal, button function or touch free IR-Sensor. Made of stainless steel, with fireproof controls.

- SCS Safety Control System with gas safety cut off: Ignition and flame control, temperature monitor, automatic unit switch off, residual heat display, burner head assembly monitor.
- BHC Burner Head Control.
- Removable burner head.
- Tilt mechanism right/left.
- Turbo flame.
- Holding device for 3 inoculation loop holders.
- Nozzles for natural gas, propane/butane gas.
- Approved by DIN-DVGW, approval no. NG2211AS0167.
- Warranty: 2 years.

Fuego SCS basic/ Fuego SCS basic RF: With stainless steel foot pedal. The foot pedal regulates the burning time either by continuous foot pressure or by start-stop function. Instrument with ON/OFF button function. Basic model without IR-Sensor and without graphic display.

Fuego SCS basic RF: Features as Fuego SCS basic but enables wireless operation due to modern radio foot pedal.

Fuego SCS/Fuego SCS pro: with Double-Click IR-sensor, button function and foot pedal operation. (foot pedal optional). Double-Click IR-sensor: This adjustable safety function ensures that the burner can only be ignited by activating the IR-Sensor twice. Adjustable IR-sensor reaction distance: 5mm to 50mm.
Illuminated graphic display: The animated, self-explanatory and language-less symbol display facilitates a rapid selection of all functions. 6 standard-programs with count down display: 1sec to 2hrs selectable.
The first safety laboratory gas burner with comfort package: Cooling time reminder for inoculation loops, temperature regulation for heating media, gas consumption display for gas cartridges, flexible and individual by selecting user account, acoustic signals as operating aids.
Additional safety assistance: Zero-pressure shut off for a pressureless gas hose. Graphical installation instructions facilitate the initial start-up.

Fuego SCS pro: Features as Fuego SCS, plus battery operation (9hrs), 2 rechargeable batteries (Mignon AA), fast charge function (3hrs) and safety tilt sensor.

Additional accessories are available on request.

1

6.232 207

2

6.231 770

Specifications

Dimensions (WxDxH):	103 x 130 x 49mm
Power supply:	100-240V 50/60Hz
Weight:	700g

Type	PK	Cat. No.
Fuego SCS basic	1	**6.232 207** 1
Fuego SCS basic RF	1	**6.255 678**
Fuego SCS	1	**6.231 770** 2
Fuego SCS pro	1	**9.018 584**
Stainless steel foot pedal	1	**9.018 585**

1

1 Culture media bottles DURAN®, glass, cylindrical

Rimless. For use with Kapsenberg caps. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable. *DURAN Group*

Capacity ml	Diam. mm	Height mm	Neck diam. mm	PK	Cat. No.
50	40	107	18	1	**9.010 050**
100	40	150	18	1	**9.010 060**
200	50	175	18	1	**9.010 070**

2

2 Kapsenberg caps

Aluminium. For the closure of culture tubes, bottles and flasks. *DURAN Group*

For neck diam. mm	PK	Cat. No.
16	1	**9.010 116**
18	1	**9.010 118**

3

9.010 153

Bottles, glass, culture medium for metal caps, DURAN®

Rimless. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable. *DURAN Group*

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
100	50	38	125	1	**9.010 150**
300	70	38	170	1	**9.010 151**
500	83	38	208	1	**9.010 152**
1000	105	38	243	1	**9.010 153**

4

4 Bottles, glass, culture medium, DURAN®

Rimless. For glass caps. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable. *DURAN Group*

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
300	71	31	169	1	**9.010 130**
500	83	46	204	1	**9.010 135**
1000	105	46	237	1	**9.010 140**

5

5 Glass caps, DURAN®

Glass Type I/neutral glass as per USP, EP and JP. Autoclavable. *DURAN Group*

For neck diam. mm	PK	Cat. No.
31	1	**9.010 180**
46	1	**9.010 185**

E & OE.

1 Culture media bottles, glass, DURAN®

Beaded rim. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable.

DURAN Group

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
100	50	29	115	1	**9.010 224**
300	70	42	168	1	**9.010 239**
500	83	42	207	1	**9.010 244**
1000	105	46	237	1	**9.010 254**
2500	150	50	315	1	**9.010 266**
5000	185	54	390	1	**9.010 273**

2 Culture flasks, DURAN®, Roux type

DURAN®. Roux type. With fire-polished, offset neck. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable.

DURAN Group

Capacity ml	Width mm	Length mm	Height mm	PK	Cat. No.
1200	123	275	56	1	**9.010 512**

3 Culture flasks, glass DURAN®, straight neck

DURAN®. Erlenmeyer. Straight neck. Suitable for metal caps. Glass Type I/neutral glass as per USP, EP and JP. With retrace code (Batch Identification). Certificate available via the Internet. Autoclavable.

DURAN Group

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
100	64	38	114	1	**9.010 472**
200	79	38	138	1	**9.010 473**
250	85	38	149	1	**9.010 474**
300	87	38	161	1	**9.010 475**
500	105	38	183	1	**9.010 476**
1000	131	38	229	1	**9.010 477**
2000	166	38	302	1	**9.010 478**

4 Erlenmeyer flasks, DURAN®

DURAN®. Straight neck , rimless. For use with Kapsenberg caps. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable.

DURAN Group

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
100	60	18	120	1	**9.010 080**

5 Culture flasks, Pyrex® borosilicate glass

- Manufactured from Pyrex® borosilicate glass
- Erlenmeyer
- Straight neck
- Suitable for metal caps

Scilabware

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
250	148	38	85	10	**9.141 175**
500	183	38	105	5	**9.141 176**
1000	229	38	131	2	**9.141 177**
2000	302	38	166	1	**9.141 178**

Disposable baffled flasks - please see page 1229.

1 Culture flasks, borosilicate glass 3.3

Erlenmeyer. With 3 side baffles. Beaded rim.

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
250	85	34	140	1	**9.010 125**
300	87	34	156	1	**9.010 126**
500	105	34	175	1	**9.010 127**
1000	131	42	220	1	**9.010 128**

2 Culture flasks, borosilicate glass 3.3

NEW!

Erlenmeyer. With 3 side baffles. Straight neck. Suitable for metal caps.

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
100	64	38	112	1	**9.010 120**
250	85	38	145	1	**9.010 121**
500	105	38	183	1	**9.010 122**
1000	131	38	232	1	**9.010 123**
2000	166	38	305	1	**6.236 466**

3 Baffled flasks, Pyrex®borosilicate glass

Scilabware

- Manufactured from Pyrex® borosilicate glass
- Exhibits 4 baffle indents to provide optimal and consistant agitation

Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
250	82	32	138	5	**9.141 171**
500	101	36	186	5	**9.141 172**
1000	129	43	222	2	**9.141 173**
2000	161	49	282	1	**9.141 174**

4 Baffled flasks DURAN®

NEW!

DURAN Group

With GL 45 thread

- Oxygen introduction is often a limiting factor for cell growth.
- Baffled flasks cause a turbulent flow, increase the gas exchange surface and produce a higher oxygen transfer.
- Automated one-step production enables a reproducible and comparable result.
- Complete with membrane screw cap (gas exchange).

Capacity ml	Bottom diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
250	85	30	145	1	**9.141 260**
500	105	30	149	1	**9.141 261**
1000	136	30	221	1	**9.141 263**

9.141 169

Fernbach baffled flasks, Pyrex®

Scilabware

For use in preparation of cultures.

- Large surface area to volume ratio
- Three laterally integrated baffles, to provide optimal and consistant agitation
- Available in 2 versions: with Delong neck, for use with culture flask caps or with PP screw cap, GL45

Description	Capacity ml	Diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
Delong neck	2800	210	38	230	2	**9.141 169** 5
Screw cap	2800	210	45	230	2	**9.141 170**

E & OE.

1 Erlenmeyer flasks with baffles, PC

Transparent. With baffles indented into the base which increases mixing when trypsinizing and aerating in processes such as cell culture and fermentation.
Autoclavable.

Thermo Scientific

Capacity ml	PK	Cat. No.
250	1	**9.140 968**
500	1	**9.140 969**
1000	1	**7.048 662**
2000	1	**7.048 663**

2 LLG- Cellulose stoppers, Steristoppers®

NEW!

Cellulose, 100% biodegradable and fully compostable autoclavable. Steristoppers® have been proved as an excellent sealing for microbiological samples and tissue cultures in test tubes and Erlenmeyer flasks. They are in constant use in many European microbiological laboratories.

- Autoclavable up to 200°C
- Filters bacteria
- Sterilisable
- Air permeable

Type	For inter. diam. mm	Bottom diam. mm	Top diam. mm	Length mm	PK	Cat. No.
No. 5 S	5.5 - 6.5	5.0	7.0	31	1000	**9.231 205**
No. 7	8.5 - 9.5	8.0	9.5	32	1000	**9.231 207**
No. 9	10.5 - 11.5	10.0	12.0	30	2000	**9.231 209**
No. 9 P	9.0 - 10.5	9.0	13.0	29	1000	**6.801 854**
No. 10	9.5 - 11.5	9.0	14.0	30	1000	**9.231 210**
No. 12	11.5 - 13.5	11.0	16.0	32	1000	**9.231 211**
No. 13	12.5 - 14.5	11.0	16.0	35	1000	**9.231 212**
No. 13 H	12.5 - 13.5	8.0	15.0	30	1000	**7.628 015**
No. 13.5	13.5 - 14.5	13.0	19.0	33	1000	**9.231 213**
No. 14	13.0 - 14.5	12.0	16.0	40	1000	**9.231 214**
No. 14,5	14.0 - 16.0	13.0	17.0	35	1000	**9.231 216**
No. 15	13.5 - 15.5	13.0	18.0	39	500	**9.231 215**
No. 15 D	13.5 - 16.0	12.0	19.0	36	5000	**6.258 570**
No. 18	17.5 - 18.5	17.0	22.0	38	500	**9.231 218**
No. 20	20.5 - 22.0	20.0	23.0	42	400	**9.231 220**
No. 22 long	22.0 - 24.0	24.0	26.0	49	500	**9.231 224**
No. 23.5 P	25.0 - 27.0	24.0	30.0	40	500	**9.231 225**
No. 26	26.0 - 27.0	24.0	28.0	42	500	**9.231 226**
No. 27	27.0 - 32.5	25.0	35.0	53	1000	**7.210 063**
No. 29	29.5 - 31.0	28.0	33.0	62	250	**9.231 229**
No. 32	32.5 - 35.0	31.0	36.0	65	100	**9.231 232**
No. 32 P	32.0 - 33.0	31.0	46.0	54	150	**9.231 233**
No. 32 W	32.5 - 35.0	31.0	36.0	65	800	**9.231 231**
No. 34	33.5 - 36.5	33.0	37.0	62	150	**9.231 234**
No. 36	35.5 - 39.5	36.0	40.0	58	600	**7.600 688**
No. 37	37.5 - 41.5	37.0	45.0	59	100	**9.231 237**
No. 38	40.0 - 43.5	37.0	47.0	60	100	**9.231 238**
No. 40 P	42.0 - 46.5	43.0	50.0	53	100	**9.231 240**
No. 45 P	47.0 - 48.0	44.0	57.0	66	75	**9.231 245**

P = correct fit, D = thin, W = soft, S = pointed, H = tougher version

1

1 Sterile stoppers SILICOSEN® and BIO-SILICO®

SILICOSEN® and BIO-SILICO® are specially processed culture plugs in sterile rubber with continuous bubbles for preparation, filling and sterilisation of culture media. Their uniform pore structure and good air permeability make them excellent for the cultivation of aerobic microorganisms.

The choice between SILICOSEN® and BIO-SILICO® culture stoppers depends on the requirements of the application. SILICOSEN® culture stoppers have low water evaporation which makes them particularly suitable for long term cultures. BIO-SILICO® culture stoppers have high air permeability, similar to cotton plugs. Both types are chemically resistant, temperature resistant, liquid repellent and reusable.

2

2 Sterile stoppers SILICOSEN® T- and L-Type

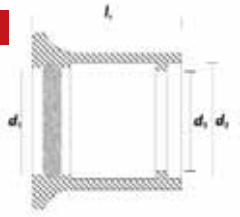
NEW!

Moisture evaporation is minimal, thus there is less drying of the culture medium. Colour: natural. *Hirschmann*

Type	Joint size (NS)	Cylinder length mm	Cone length mm	PK	Cat. No.
T-10	6/9	13	17	1	**9.231 010**
T-12	9/11	14	17	1	**9.231 012**
T-15	11/14	15	20	1	**9.231 015**
T-17	13/16	10	30	1	**9.231 017**
T-19	15/18	12	30	1	**9.231 019**
T-22	18/21	15	30	1	**9.231 022**
T-24	20/23	21	31	1	**9.231 024**
T-28	20/23	20	35	1	**9.231 028**
T-32	22/30	23	32	1	**9.231 032**
T-38	26/35	30	35	1	**9.231 038**
T-42	30/40	35	50	1	**9.231 042**
T-52	40/50	40	60	1	**9.231 052**
T-66	54/63	40	60	1	**9.231 066**
T-76	64/74	40	60	1	**9.231 076**
L-12	9/11	40	10	1	**9.231 072**
L-17	13/16	30	20	1	**9.231 077**
L-22	18/21	30	30	1	**9.231 082**

3

4



3 4 Sterile stoppers SILICOSEN® C-Type

NEW!

Superb permeability and fits tight onto the media container due to sealing lip, where importance is placed on mounting quality. Suitable for shaking cultures. *Hirschmann*

Type	Joint size (NS)	d1 mm	l1 mm	d2 mm	d3 mm	PK	Cat. No.
C-20	15/20	16	28	12	20	1	**9.231 120**
C-30	20/30	26	28	18	30	1	**9.231 130**
C-40	30/40	36	28	27	40	1	**9.231 140**
C-55	40/50	50	28	34	55	1	**9.231 150**
C-65	42/52	57	42	65	28	1	**9.231 160**

5

5 Sterile stoppers SILICOSEN® S-Type

Superb permeability. Suitable for aerobic bacterium cultures and shaking cultures. *Hirschmann*

Type	Joint size (NS)	Top diam. mm	Bottom diam. mm	Cylinder length mm	Cone length mm	PK	Cat. No.
S-28	17/26	28	17	18	27	1	**9.231 178**
S-35	24/33	35	24	20	30	1	**9.231 185**
S-40	28/38	39	28	20	30	1	**9.231 190**

E & OE.

1 Sterile stoppers BIO-SILICO® N-Type

NEW!

Cell size is uniform, which provides stable and good permeability. Optimum product for shaking cultures-durability and operability are excellent.

Hirschmann

Type	Joint size (NS)	Top diam. mm	Bottom diam. mm	Cylinder length mm	Cone length mm	PK	Cat. No.
N-12	9/11	13	9	13	17	1	**9.231 100**
N-15	11/14	16	11	14	22	1	**9.231 101**
N-17	13/16	19	13	15	25	1	**9.231 102**
N-19	15/18	21	15	16	28	1	**9.231 103**
N-22	18/21	24	18	18	30	1	**9.231 104**
N-24	20/23	26	20	20	32	1	**9.231 105**
N-28	21/26	30	21	20	34	1	**9.231 109**
N-32	22/30	34	22	24	36	1	**9.231 106**
N-42	30/40	44	30	32	46	1	**9.231 107**
N-52	40/50	54	40	36	50	1	**9.231 108**

2 LLG-Test tubes, AR® soda-lime glass

Test tubes with round bottom made out of AR®-Glass. Hydrolytic resistance: Class HGB 3 acc. to ISO 719, Type III acc. to C - USP.

Diam. mm	Height mm	Wall thickness mm	Description	PK	Cat. No.
8	70	0.5	with beaded rim	100	**6.201 034**
10	100	0.5	with beaded rim	100	**6.801 073**
12	100	0.5	with beaded rim	100	**7.607 198**
14	130	0.5	with beaded rim	100	**6.800 620**
16	130	0.6	with beaded rim	100	**6.800 382**
16	160	0.6	with beaded rim	100	**7.600 405**
20	180	0.6	with beaded rim	100	**7.607 778**
25	150	0.9	with beaded rim	50	**6.800 621**
30	200	0.9	with beaded rim	50	**7.600 324**
30	100	1.0	without rim	100	**6.267 806**
15	100	1.0	without rim	100	**7.651 872**
16	120	1.0	without rim	100	**7.651 871**
18	130	1.0	without rim	100	**7.652 552**

3 Culture tubes, soda glass, not graduated

NEW!

Rimless or with PP screw cap and white TPE elastomer seal. Autoclavable at 121°C (2 bar), according to DIN EN 285.

BRAND

Capacity ml	Ext. diam. mm	Height mm	Wall thickness mm	Max. rcf x g	Description	PK	Cat. No.
6.5	12	100	1.00	3000	thread GL 14	100	**9.010 032**
10.0	16	100	1.00	3000	thread GL 18	100	**9.010 036**
20.0	16	160	1.00	1800	thread GL 18	100	**9.010 037**
30.0	18	180	1.00	1100	thread GL 18	100	**7.019 348**
3.0	10	75	0.60	3000	rimless	250	**9.010 040**
5.5	12	75	0.60	3000	rimless	250	**9.010 041**
7.5	12	100	0.60	3000	rimless	250	**9.010 042**
13.0	16	100	0.70	2600	rimless	78	**9.010 043**
18.0	16	125	0.70	1800	rimless	105	**9.010 044**
22.0	16	160	0.70	1500	rimless	100	**9.010 045**
30.0	18	180	0.70	900	rimless	121	**9.010 039**

1 Culture tubes, Pyrex®, PTFE

NEW!

Scilabware

- Ideal for culture work
- Manufactured from Pyrex® borosilicate glass
- High resistance to attack from water reduces leaching of contaminants which can cause pH changes
- Phenolic screwcaps with inert PTFE lined rubber disc
- Cap can withstand repeated dry heat and steam sterilisation cycles (121°C for 2 hours)

Diam. mm	Height mm	Wall thickness mm	Neck thread mm	PK	Cat. No.
14	100	1.5	13	40	**6.226 022**
16	100	1.8	15	40	**6.226 949**
16	125	1.8	15	40	**6.254 027**
16	160	1.8	15	40	**6.253 961**
18	100	1.8	18	40	**6.258 472**
18	180	1.8	18	40	**6.226 619**
20	100	1.8	20	40	**6.236 081**
20	200	1.8	20	40	**6.231 721**
22	200	1.8	22	40	**6.253 139**
26	100	2.0	25	40	**6.226 950**
26	200	2.0	25	40	**6.228 145**

Culture tubes are not recommended for centrifugation.
Do not autoclave with a tightly screwed cap, always slacken off. Failure to adopt this procedure may result in tube breakage.

2 Disposable culture tube, Soda-lime-glass

From Soda-lime-glass. Straight rim.

DURAN Group

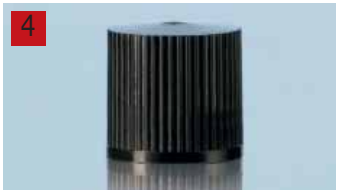
Capacity ml	Outer diam. mm	Height mm	Wall thickness mm	PK	Cat. No.
6	12.25	75	0.80	500	**6.235 314**
14	15.50	100	0.80	250	**7.200 457**

3 Disposable culture tube, soda-lime glass, with screw cap

From Soda-lime glass. With DIN thread and PP1 screw cap

DURAN Group

Capacity ml	Outer diam. mm	Height mm	Wall thickness mm	DIN-Thread GL	PK	Cat. No.
6	12	100	1	14	100	**7.021 547**
12	16	100	1	18	100	**7.021 548**
22	16	160	1	18	100	**7.021 549**
32	18	180	1	18	100	**7.021 550**



4 Screw cap for culture tubes, PP, with seal

With seal from TPE.

DURAN Group

DIN-Thread GL	PK	Cat. No.
14*	100	**6.238 341**
18	100	**6.702 588**

More culture tubes please see page 26.

E & OE.

1 Culture tubes, Borosilicate glass, screw cap

For culture growth, transport and storage. Heavy walled, thickness 1.1mm. Wide neck for easy inoculation and cleaning. Complete with aluminium or plastic screw cap and rubber sealing gasket. The 15ml size is specifically designed for use in centrifuges. Autoclavable.

schuett-biotec

Capacity ml	Diam. mm	Height mm	Screw cap	PK	Cat. No.
15	16	98	Aluminium	100	**9.010 612**
20	16	150	Aluminium	100	**9.190 600**
15	16	98	Plastic	100	**9.010 613**
20	16	150	Plastic	100	**9.190 605**
50	25	150	Plastic	100	**9.010 620**

2 Tubes, glass, DURAN®, culture, screw cap

DIN thread. Complete with red PBT screw cap with PTFE-faced sealing wad. Thus, it is suitable for the cultivation of microorganisms. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable.

DURAN Group

Diam. mm	Height mm	Neck thread GL	PK	Cat. No.
12	100	14	50	**9.010 012**
13	100	14	50	**9.010 013**
16	150	18	50	**9.010 014**
16	160	18	50	**9.010 016**
18	180	18	50	**9.010 018**
20	150	18	50	**9.010 019**

3 Culture tubes, glass DURAN®, small, rimless

To DIN 38411. Rimless. Suitable for use with Kapsenberg caps. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable. Please order cap separately.

DURAN Group

Diam. mm	Height mm	Wall thickness mm	PK	Cat. No.
16	160	1.0 to 1.2	100	**9.010 046**
18	180	1.0 to 1.2	100	**9.010 048**

4 Culture tubes, Durham, soda lime glass

NEW!

Durham culture tubes are mainly used in microbiology to detect gas produced by micro organisms. These special tubes are placed upside down in bigger test tubes.
- Made of soda lime glass
- With straight rim and with round bottom
- Ungraduated

Marienfeld

Diam. mm	Wall thickness mm	Height mm	PK	Cat. No.
6	0.7	35	250	**6.266 183**
6	0.7	50	350	**6.266 184**

Metal caps

For culture flasks and culture medium bottles.

DURAN Group

Material	For neck diam. mm	PK	Cat. No.
Stainless steel	38	1	**9.010 481** 5
Aluminium, anodised blue	38	1	**9.010 482** 6

9.010 481

9.010 482

Kapsenberg caps - please see page 1250.

1

1 Metal caps, Erlenmeyer, Aluminium

Anodised in a choice of colours. *schuett-biotec*
Special caps for sterile, but not hermetically sealing, closure of culture flasks and media bottles with straight, rimmed or rimless necks as indicated. With nichrome steel springs that clamp onto the outer wall of the container.
Cleaning advice available on request.

For neck diam. mm	Colour	With rim	PK	Cat. No.
37/39	silver	no	10	**9.231 456**
37/39	blue	no	10	**9.231 457**
37/39	red	no	10	**9.231 458**

2

2 Metal caps, Labocap without handle

schuett-biotec

For neck diam. mm	Handle	Colour	PK	Cat. No.
9/10	without	blue	100	**9.231 421**
12/13	without	blue	100	**9.231 422**
14/15	without	blue	100	**9.231 423**
15/16	without	blue	100	**9.231 424**
17/18	without	blue	100	**9.231 425**
19/20	without	blue	100	**9.231 426**
21/23	without	blue	100	**9.231 427**
24/26	without	blue	100	**9.231 428**
28/30	without	blue	100	**9.231 429**
9/10	without	red	100	**9.231 441**
12/13	without	red	100	**9.231 442**
14/15	without	red	100	**9.231 443**
15/16	without	red	100	**9.231 444**
17/18	without	red	100	**9.231 445**
19/20	without	red	100	**9.231 446**
21/23	without	red	100	**9.231 447**
24/26	without	red	100	**9.231 448**
28/30	without	red	100	**9.231 449**
12/13	without	yellow	100	**9.231 460**
15/16	without	yellow	100	**9.231 461**
17/18	without	yellow	100	**9.231 462**
19/20	without	yellow	100	**9.231 339**
12/13	without	green	100	**9.231 463**
15/16	without	green	100	**9.231 464**
17/18	without	green	100	**9.231 465**
19/20	without	green	100	**9.231 340**
09/10	without	silver	100	**9.231 369**
12/13	without	silver	100	**9.231 372**
14/15	without	silver	100	**9.231 374**
15/16	without	silver	100	**9.231 375**
17/18	without	silver	100	**9.231 377**
19/20	without	silver	100	**9.231 379**
21/23	without	silver	100	**9.231 381**
24/26	without	silver	100	**9.231 385**
28/30	without	silver	100	**9.231 388**
12/13	without	black	100	**9.231 334**
15/16	without	black	100	**9.231 466**
17/18	without	black	100	**9.231 337**
19/20	without	black	100	**9.231 341**
12/13	without	violet	100	**9.231 335**
15/16	without	violet	100	**9.231 336**
17/18	without	violet	100	**9.231 338**
19/20	without	violet	100	**9.231 342**
12/13	without	brown	100	**9.231 435**
15/16	without	brown	100	**9.231 436**
17/18	without	brown	100	**9.231 437**
19/20	without	brown	100	**9.231 438**

E & OE.

1 Metal caps, Labocap with handle, Aluminium

Anodised in a choice of colours. For sterile, but not hermetically sealing, closure of containers. With nichrome steel springs that clamp onto the outer wall of the container. Autoclavable. Cleaning advice available on request. *schuett-biotec*

For neck diam. mm	Handle	Colour	PK	Cat. No.
15/16	with	silver	100	**9.231 345**
17/18	with	silver	100	**9.231 347**
15/16	with	blue	100	**9.231 403**
17/18	with	blue	100	**9.231 404**
15/16	with	red	100	**9.231 413**
17/18	with	red	100	**9.231 414**
15/16	with	yellow	100	**9.231 326**
17/18	with	yellow	100	**9.231 330**
15/16	with	green	100	**9.231 327**
17/18	with	green	100	**9.231 331**
15/16	with	black	100	**9.231 328**
17/18	with	black	100	**9.231 332**
15/16	with	violet	100	**9.231 329**
17/18	with	violet	100	**9.231 333**

1

2 Aluminium caps, pure aluminium

Matt finish. Without internal clips. Loose-fit caps for sterile, but not hermetically sealing, closure of culture flasks and other containers. Can also be used as open specimen holders. Autoclavable. *schuett-biotec*

Int. diam. mm	Height mm	PK	Cat. No.
11	25	100	**9.230 821**
12	25	100	**9.230 822**
13	25	100	**9.230 823**
14	25	100	**9.230 824**
15	25	100	**9.230 825**
16	30	100	**9.230 826**
17	30	100	**9.230 827**
18	30	100	**9.230 828**
20	30	100	**9.230 829**
22	30	100	**9.230 830**
28	30	100	**9.230 831**
32	30	100	**9.230 832**
39	30	10	**9.230 833**
44	40	10	**9.230 834**
48	40	10	**9.230 835**
55	40	10	**9.230 836**
58	40	10	**9.230 837**

2

We can supply this manufacturer's whole product range !

partner of the LLG Lab Logistics Group

schuett-biotec.de

Shaking Incubator's, SI500/SI505/SI600

Stuart

- Digital LED control panel
- Independent control of speed and temperature
- Timer 1 second to 9 days
- Alarm
- Retraceble platform, easier access to the samples

1

9.951 612

Shaking Incubator's, SI500/SI600

Stuart

The SI500 combined shaker and incubator is ideal for scientists doing cell culturing procedures, especially suspension culture applications. It is compact enough to be positioned on the laboratory bench. The platform of both models has a versatile clamping system which secures most sizes and mixtures of flask up to 1 litre capacity for the SI500 and 2 litre capacity for the SI600. Typically, the platform of the SI500 will accommodate the following Erlenmeyer flasks: 12 x 250ml, or 9 x 500ml or 6 x 1000ml. The SI600 will accomodate 6 x 2 l, 9 x 1000 ml or 15 x 500 ml Erlenmeyer flasks.

Specifications

Temperature range:	Amb.+ 5°C to + 60°C
Samples:	adjustable platform or tube racks
Display resolution:	0.1°C
Precision:	±0.5°C at 37°C
Fluctuation:	±0.5°C at 37°C
Variation:	< 0.5°C at 37°C
Speed range:	30 to 300rpm
Timer:	min/sec, hr/min, days/hrs
Platform size	
SI500:	335 x 335mm
SI600:	526 x 390mm
Max. vessel height	
SI500:	250 mm
SI600:	300 mm
Volumen	
SI500:	51 l
SI600:	115 l
Max. load:	10kg
Heater power	
SI500:	250 W
SI600:	400 W
Supply requirements:	230V 50Hz

Type	Amplitude	Internal dimensions (W x D x H)	External dimensions (W x D x H)	Weight	PK	Cat. No.
	mm	mm	mm	kg		
SI500	16.0	422 x 408 x 297	450 x 474 x 522	30.00	1	**9.951 612** 1
SI600	16.0	623 x 465 x 395	675 x 542 x 642	55.00	1	**9.645 351**

2

2 Shaking Incubator, SI505

Stuart

The SI505 has been designed specifically to combine a bench top laboratory incubator with the specific mixing action required for microtitre plates. With a tight orbit of 1.5mm and a high speed shaking action between 250rpm and 1250rpm even the smallest of vessels can be adequately mixed. To minimize sample evaporation the SI505 is supplied with stainless steel water trays, these are strategically placed within the unit to maintain a humidity of up to 80%, thus dramatically reducing sample evaporation over a 24 hour period.

Specifications

Temperature range:	Amb.+7°C to 60°C
Samples:	4 x microplates or 2 x microtube racks
Display resolution:	0.1°C
Precision:	±0.5°C at 37°C
Fluctuation:	±0.5°C at 37°C
Variation:	< 0.6°C at 37°C
Speed range:	250 to1250rpm
Timer:	min/sec, hr/min, days/hrs
Platform size:	220 x 220mm
Max. load:	1kg
Heater power:	200W
Supply requirements:	230V 50Hz

Type	Amplitude	Internal dimensions (W x D x H)	External dimensions (W x D x H)	Weight	PK	Cat. No.
	mm	mm	mm	kg		
SI505	1.5	307 x 300 x 190	361 x 405 x 430	22.50	1	**9.645 350**

E & OE.

LLG-Micropestles, stainless steel

Polished stainless steel, micropestles. Precisely fitted for Eppendorf Safe-Lock Tubes™, manufactured in one-piece, smooth handle sections, can be disinfected easily. Minimum homogenate displacement due to tapered piston.

For Reaction tubes:
For homogenisation of cells, tissues or foodstuffs/feed samples.
- For tubes with 0.5ml, 1.5ml and 2.0ml
- Can be cooled down to -196°C
- Sterilisable in an autoclave or dry heat at +200°C
- Suitable for PCR applications
- Alternative to single-use plastic pestles
- Perfectly suitable for Eppendorf Safe-Lock Tubes

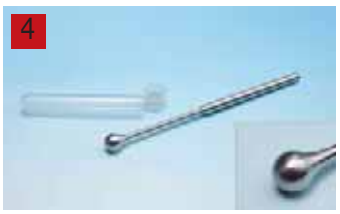
For Sarstedt tubes:
Primarily used with food analysis with highly processed samples in which little DNA, protein or allergen is present.
- For tubes 13ml (Cat. No. 6.239 124)

For bottle ml	Pestle length mm	PK	Cat. No.	
0.5	94	1	**9.314 500**	1
1.5	124	1	**9.314 501**	2
2.0	120	1	**9.314 502**	3
13.0	190	1	**9.314 503**	4

9.314 500

9.314 501

9.314 502



9.314 503

5 Micro pestles, CTFE/stainless steel

Reusable, for 500µl and 1.5ml reaction tubes. Autoclavable CTFE/stainless steel. Suitable for battery-operated drive motor (9.314 496).

For bottle ml	Pestle length mm	PK	Cat. No.
0.5	60	1	**9.314 494**
1.0	140	1	**9.314 495**

6 EPPI pestle, PP

For resuspending pellets and homogenising within tubes (1.5, 2.0ml, exact fit). *schuett-biotec*
Autoclavable. Suitable for homogeniser/motor drive.

For bottle ml	Pestle length mm	PK	Cat. No.
1.5/2.0	70	10	**9.197 689**

Disposable Pellet pestles, PP, with reaction tube

NEW!

Autoclavable polypropylene. Suitable for battery-operated drive motor (9.314 496). Pestle length 7cm. Supplied with reaction tube, except Cat. No. 9.314 492 and 9.314 493.

For bottle ml	Pestle length mm	Description	PK	Cat. No.
0.5	70	with reaction tube	100	**9.314 490**
0.5	70	without reaction tube	100	**9.314 492**
0.5	70	with reaction tube, RNase, DNase and pyrogen free	100	**9.314 498**
1.5	70	with reaction tube	100	**9.314 491**
1.5	70	without reaction tube	100	**9.314 493**
1.5	70	with reaction tube, RNase, DNase and pyrogen free	100	**9.314 499**

1 Micro pestles, PTFE, with stainless steel shaft

PTFE. With stainless steel shaft diam. 3.2mm. For 1.5ml reaction tubes.
Ideal for re-suspending lyophilized products or precipitates, and for homogenizing samples in a microcentrifuge tube.
Overall length 143mm Steam autoclavable at 121ºC. May be hand-held or mounted in a motorized chuck.

For bottle ml	Pestle length mm	Description	PK	Cat. No.
1.5	143	Flat tip	1	**9.315 000**
1.5	143	Round tip	1	**9.315 001**

2 Micro pestles, accessory drive motor

Description	PK	Cat. No.
Complete with two batteries	1	**9.314 496**
Spare pestle adapter	1	**9.314 497**

9.651 051

4 Tissue Grinders System

For safety grinding of any cells by minimal temperature rising. Closed System (CS) for minimizing the risk of personal contact with aerosols and sample overflow while grinding. *Kimble Chase*
Optimal contact of grinder and conical sample tube (15 or 50ml) to grind each cell in the best way.
Each unit is gamma sterilized and comes with a fully assembled pestle , conical sample tube (PP), solid top cap (PE-HD) and label.
Type CS1: Tip from glass-filled PP (30%/70%) for standard grinding
Type CS2: Vitrified tip (cast silica) for harder grinding

For bottle ml	Type	PK	Cat. No.
15	CS 1	10	**9.651 050**
50	CS 1	10	**9.651 051**
15	CS 2	10	**9.651 052**
50	CS 2	10	**9.651 053**

5 General Purpose Homogenisers, Borosilicate glass

NEW!

- Precision Bore Borosilicate glass mortars with a range from 5.0 to 55ml capacity *GPE Scientific Limited*
- Borosilicate glass pestle
- All parts are fully autoclavable

Grinding Clearance Pestle and Mortar: 0.152 to 0.254mm

Capacity ml	Chamber Length mm	Mortar Overall length mm	Pestle Length mm	Pestle Diam. mm	PK	Cat. No.
5	65	95	195	10	1	**6.264 837**
10	75	115	215	13	1	**6.264 838**
15	80	120	220	15	1	**6.264 839**
30	105	150	250	19	1	**6.264 840**
55	125	175	295	25	1	**6.264 841**

E & OE.

1 Homogenisers, Safe-Seal, borosilicate glass 3.3/PTFE

Supplied complete with a PTFE pestle, stainless steel handle and borosilicate glass mortar which is stoppered in PTFE to protect against splash back during the grinding process. Autoclavable.

GPE Scientific Limited

Capacity	Pestle L x o.d.	Mortar L x o.d.	PK	Cat. No.
ml	mm	mm		
5	250 x 10	140 x 15	1	**9.164 501**
10	250 x 13	150 x 17	1	**9.164 502**
15	250 x 15	155 x 19	1	**9.164 503**
30	250 x 19	180 x 23	1	**9.164 504**

2 Potter-elvehjem homogenisers, Borosilicate glass

NEW!

- Potter-elvehjem homogenisers are designed to work with soft tissue
- Precision Bore Borosilicate glass mortars with a range from 5.0 to 55ml capacity
- PTFE Pestle
- Standard stainless steel rod for use with an electric motor
- Optional stainless steel handle for manual grinding
- All parts are fully autoclavable

GPE Scientific Limited

Grinding Clearance Pestle and Mortar: 0.076 to 0.126mm

Capacity	Chamber Length	Mortar Overall length	Pestle Length	Pestle Diam.	PK	Cat. No.
ml	mm	mm	mm	mm		
5	65	95	250	10	1	**6.264 842**
10	75	115	250	13	1	**6.264 843**
15	80	120	250	15	1	**6.264 844**
30	105	150	250	19	1	**6.264 845**
55	125	175	250	25	1	**6.264 846**

Stainless steel handle for Potter-elvehjem homogenisers

Description	PK	Cat. No.
Stainless steel handle for pestles	1	**9.164 515**

3 Homogenisers, Mini series, borosilicate glass 3.3

Manufactured from high quality borosilicate glass this range of mini homogenisers is ideal for micro tissue work. Bodies are clear precision glass. Pestles have ground glass working length. With or without handles. Fully autoclavable.
Grinding clearance pestle and mortar 0.152mm to 0.254mm.

GPE Scientific Limited

Capacity	Pestle L x o.d.	Mortar L x o.d.	Description	PK	Cat. No.
ml	mm	mm			
0.1	75 x 3.65	60 x 9	with handle	1	**9.164 541**
1.0	150 x 5.00	105 x 10	with handle	1	**9.164 542**
3.0	170 x 9.00	115 x 13	with handle	1	**9.164 543**
0.1	75 x 3.65	60 x 9	without handle	1	**9.164 544**
1.0	150 x 5.00	105 x 10	without handle	1	**9.164 545**
3.0	170 x 9.00	115 x 13	without handle	1	**9.164 546**

4 Homogenisers, Griffiths tube, Borosilicate glass 3.3

For grinding bacterial emulsions and tissues. Rounded pestle and mortar ends, ensure perfect grinding. Autoclavable. Large Griffiths tube is ideal for coarse material.

GPE Scientific Limited

Capacity	Pestle L x o.d.	Mortar L x o.d.	Description	PK	Cat. No.
ml	mm	mm			
5	150 x 12	95 x 18	small	1	**9.164 550**
15	305 x 14	220 x 18	large	1	**9.164 551**

1

1 Duall homogenisers, with glass pestle

With conical and cylindrical area for effective tissue for grinding and also for homogenising. Especially suitable for cellular tissue such as muscle, heart and lungs. The pestle is sufficiently stable to be motor driven. The space between the pestle and mortar is between 0.1mm to 0.15mm. Spare components are available and are completely interchangeable.

Capacity	Size	Pestle L x o.d.	Mortar L x o.d.	PK	Cat. No.
ml		mm	mm		
1	20	155 x 6	80 x 13	1	**9.651 637**
3	21	207 x 6	120 x 16	1	**9.651 638**
5	22	220 x 8	150 x 18	1	**9.651 639**
15	23	278 x 10	175 x 25	1	**9.651 641**
30	24	310 x 10	215 x 32	1	**9.651 642**
50	25	345 x 16	225 x 38	1	**9.651 643**

2

2 Duall homogenisers, with PTFE pestle

With conical and cylindrical area for effective tissue for homogenising. The PTFE pestle is ideal for soft tissue such as brain or liver. The pestle is suitable for motor drive. The space between the pestle and mortar is between 0.1mm to 0.15mm. Spare components are available and are completely interchangeable.

Capacity	Size	Pestle L x o.d.	Mortar L x o.d.	PK	Cat. No.
ml		mm	mm		
1	20	155 x 4.5	80 x 13	1	**9.651 656**
3	21	210 x 6	120 x 16	1	**9.651 657**
5	22	228 x 6	150 x 18	1	**9.651 658**
15	23	268 x 6	175 x 25	1	**9.651 659**
30	24	305 x 10	215 x 32	1	**9.651 660**
50	25	330 x 10	225 x 38	1	**9.651 661**

3

3 Homogenisers Potter-Elvehjem, with glass pestle

All-glass. Pestle is suitable for motor drive. The space between the pestle and mortar is between 0.1mm to 0.15mm. Spare components are available and are completely interchangeable.

Capacity	Size	Pestle L x o.d.	Mortar L x o.d.	PK	Cat. No.
ml		mm	mm		
1	19	145 x 5	95 x 13	1	**9.651 674**
5	21	205 x 6	140 x 16	1	**9.651 675**
8	22	215 x 8	150 x 18	1	**9.651 676**
17	23	265 x 10	175 x 25	1	**9.651 677**
45	24	315 x 10	220 x 32	1	**9.651 678**

4

4 Homogenisers Potter-Elvehjem, with PTFE pestle

With PTFE pestle and glass mortar. Sizes 21 and 24 have notches on the bottom edge of the pestle so that particles can be transported up to the cylindrical part of the mortar for extraction. The space between the pestle and mortar is between 0.1mm to 0.15mm. Spare components are available and are completely interchangeable.

Capacity	Size	Pestle L x o.d.	Mortar L x o.d.	PK	Cat. No.
ml		mm	mm		
0.5	18	130 x 3	80 x 12	1	**9.651 689**
1	19	154 x 5	95 x 12	1	**9.651 690**
3	20	154 x 5	115 x 12	1	**9.651 691**
5	21	215 x 6	140 x 15	1	**9.651 692**
8	22	212 x 6	150 x 19	1	**9.651 693**
17	23	266 x 6	175 x 25	1	**9.651 694**
45	24	269 x 6	220 x 32	1	**9.651 695**

E & OE.

1 Homogenisers with PTFE or glass pestles

For use with all homogeniser drive-units or for schuett homgen^{plus}. *schuett-biotec*
Homogenisers and pestles provide a precise shape and are consequently separately exchangeable. Clearance between pestle and homogeniser is between 0.18 and 0.23 mm.

Homogeniser with PTFE pestle
Tapered or cylindrical. Shaft made of stainless steel. Inert. Elastic. With smooth, wax-like, moisture-rejecting surface. Resistant against high temperatures. Also available as glass fiber reinforced model. Highly efficient with especially tough tissue.

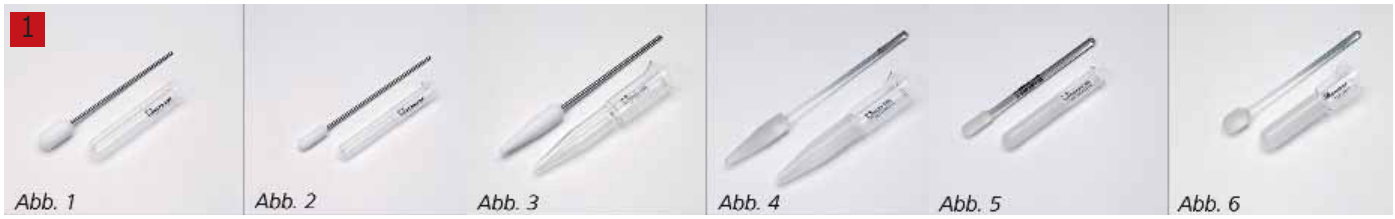
Homogeniser with glass pestle
Tapered or cylindrical. With robust glass shaft. Ground-glass surface in cylindrical/tapered part. Highly efficient with tough tissue.

Homogenizers and pestles also available individually as spare parts.

Glass mortar Type 1: With flared overflow neck and spout, conical
Glass mortar Type 2: Without flared overflow neck, cylindrical
Glass mortar Type 3: With flared overflow neck and spout, cylindrical
Glass mortar Type 4: Round bottom, with flared overflow neck, without spout, cylindrical

Capacity ml	Glass mortar type	Form	Figure	PK	Cat. No.
2	1	PTFE pestle tapered	3	1	**9.651 850**
15	1	PTFE pestle tapered	3	1	**9.651 851**
40	1	PTFE pestle tapered	3	1	**9.651 852**
2	2	PTFE pestle cylindrical	1	1	**9.651 853**
5	2	PTFE pestle cylindrical	1	1	**9.651 854**
10	2	PTFE pestle cylindrical	1	1	**9.651 855**
15	3	PTFE pestle cylindrical	2	1	**9.651 856**
20	2	PTFE pestle cylindrical	1	1	**9.651 857**
30	2	PTFE pestle cylindrical	1	1	**9.651 858**
40	3	PTFE pestle cylindrical	2	1	**9.651 859**
5	2	PTFE pestle cylindrical*	1	1	**9.651 860**
10	2	PTFE pestle cylindrical*	1	1	**9.651 861**
15	3	PTFE pestle cylindrical*	2	1	**9.651 862**
30	2	PTFE pestle cylindrical*	1	1	**9.651 863**
40	3	PTFE pestle cylindrical*	2	1	**9.651 864**
2	1	Glass pestle, tapered	4	1	**9.651 865**
15	1	Glass pestle, tapered	4	1	**9.651 866**
40	1	Glass pestle, tapered	4	1	**9.651 867**
8	4	Glass pestle, cylindrical	5	1	**9.651 868**
15	4	Glass pestle, cylindrical	5	1	**9.651 869**
40	3	Glass pestle, cylindrical	6	1	**9.651 870**

*glass-fibre reinforced



2 Homogenisers, Dounce, glass

For fine particle size reductions without damage to cell nuclei. Supplied with interchangeable pestles ground and polished to large' and small' clearances for use in the same tube. *GPE Scientific Limited*
Includes 2 larges pestle used for sample preparation and 2 tight pestles for final homogenate.

Capacity ml	Pestle L x o.d. mm	Mortar L x o.d. mm	PK	Cat. No.
1	117 x 7.5	82 x 12	2	**9.164 690**
7	175 x 13	125 x 17	2	**9.164 691**
15	210 x 15	160 x 19	2	**9.164 692**
40	285 x 25	210 x 31	2	**9.164 693**

1

1 Homogenisers, Duo-Form, Borosilicate glass 3.3

GPE Scientific Limited

The pestles are conicaly shaped at the tip and cylindrically shaped in the upper part. Thiscombination gives two separate areas, one for initial grinding and a second for final homogenisation.

Capacity ml	Pestle L x o.d. mm	Mortar L x o.d. mm	Mortar	Pestle	PK	Cat. No.
15	250 x 15	155 x 19	ground	with rod	1	**9.164 680**
15	250 x 15	155 x 19	clear glass	with rod	1	**9.164 681**
15	250 x 15	155 x 19	ground	with handle	1	**9.164 682**
15	250 x 15	155 x 19	clear glass	with handle	1	**9.164 683**

2

2 Homogeniser drive unit, schütt homgen^{plus}

schuett-biotec

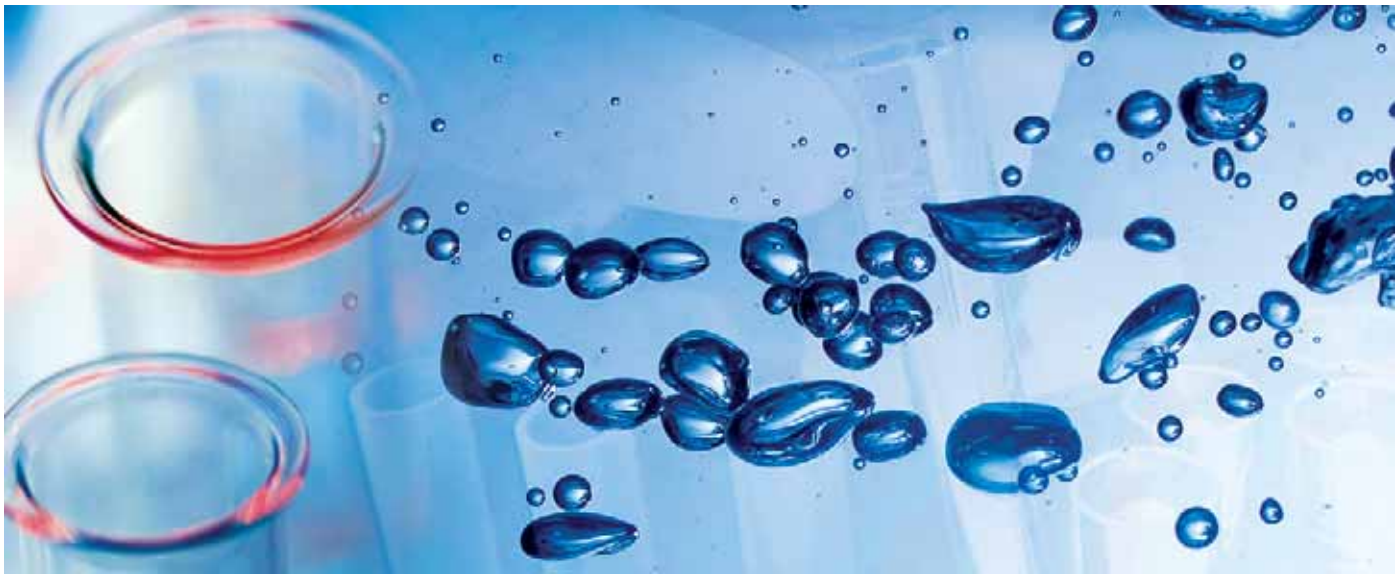
For the gentle homogenisation of biological samples or for grinding tough, rigid material which is difficult to break down. Complete with load-compensating drive unit and universal quick-action chuck, transparent plexiglas cooling jacket and multi-purpose spanner for centering homogenising vessels of varying sizes. Portable, but highly stable and vibration-free due to its triple-post frame construction, and easy to use. Provides high torque, even at the low speed range, ensuring extremely powerful homogenising. Continuously adjustable speed range: 40rpm to 3000rpm. Provides reproducible homogenising by maintaining constant rotational speed, which is shown on an easy to read, 4-digit LED display. The fast-action clamping chuck with hollow shaft permits rapid and easy replacement of the pestle and allows pestles with longer shafts to be used. We highly recommend using a quick-grip chuck for glass pestles to minimise lateral movement (and therefore strain) of the glass shaft. The cooling jacket incorporates a clamping holder suitable for Eppendorf test tubes and homogenising vessels with outside diameters from 10mm to 40mm. Sample cooling is easily achieved using ice, which can be introduced into the cooling jacket through a screw capped opening. The homogenising vessel moves up and down in conjunction with the cooling jacket platform and is raised and lowered using a lever jack. The long lever facilitates thorough homogenising without much effort. For 230V 50/60Hz, 300 W single phase supplies (optionally available for 115V 50/60Hz).

Supplied with: schuett homgen^{plus} homogeniser drive unit with universal keyless chuck, incl. cooling vessel, 1000 ml and universal chuck set (consisting of 6 sizes).

We also offer a sterile alternative for use in a glove box and with infectious material. Details on request.

Type	External dimensions (W x D x H) mm	PK	Cat. No.
schuett homgen^{plus}, 230 V	300 x 350 x 888	1	**9.651 560**
Quick-change chuck for glass pestle	-	1	**9.651 564**

Further Homogenisers please see our chapter 5



E & OE.

Mixer Mills MM 200/400

Retsch

The mixer mills are true laboratory "all-rounders". They have been developed specially for grinding, homogenising and mixing of small amounts of sample in only a few seconds.
They are also perfectly suitable for the disruption of biological cells as well as for DNA/RNA recovery. The MM 400 can also be used for cryogenic and wet grinding.

Features:
- 2 milling stations
- Digital setting of time and vibration intensity
- 9 separate programmes can be stored
- Wide selection of grinding jar sizes and materials
- Self-locking and self-centering, clamping device for grinding jars (MM 400)
- Screw-top grinding jars up to 50ml, especially suitable for wet and cryogenic grinding (MM 400)

Accessories for cryogenic grinding and adapter with centrifuge tubes for cell disruption available on request.
Grinding jars and balls please order separately.

1

9.739 080

Specifications

Feed size*	
MM 200:	up to 6mm
MM 400:	up to 8mm
Ultimate fineness*	
MM 200:	< 10µm
MM 400:	< 5µm
Charge	
MM 200:	max. 2 x 10ml
MM 400:	max. 2 x 20ml
Digital preselection of vibrational frequency	
MM 200:	3 to 25Hz (180 to 1500rpm.)
MM 400:	3 to 30Hz (180 to 1800rpm.)
Power supply:	100 - 240V 50/60Hz

Type	Dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
MM 200	371 x 461 x 266	25.00	1	**9.739 080** 1
MM 400	371 x 461 x 266	26.00	1	**9.739 091**

*depending on feed material

2 Mixer Mill CryoMill

Retsch

The CryoMill is designed for the cryogenic size reduction of materials which cannot be ground at room temperature or whose composition would be changed by it. The grinding jar is cooled before and during the grinding process with liquid nitrogen through an integrated cooling system. Thus the sample is embrittled and its volatile components are preserved. The size reduction principle is the same as that of the well-proven Mixer Mill MM 400. The CryoMill can also be operated without the cooling system which makes it suitable for a wide range of applications.

Features:
- Powerful cryogenic grinding by impact and friction, up to 30 Hz
- Closed LN_2-system (autofill) for enhanced safety, avoids any contact of the user with LN2
- Screw-top grinding jars for convenient, leak-proof operation
- Clearly structured user interface, memory for 9 SOPs
- Wide range of accessories including LN_2 feeding systems, various jar and ball sizes, adapter racks, materials

2

Specifications

Feed size	up to 8mm
Ultimate fineness	< 5µm
Charge	max. 1 x 20ml
Adjustable frequency range	3 to 30Hz (180 to 1800rpm.)
Dimensions (WxDxH)	385 x 675 x 370mm
Weight	40kg
Power supply:	100 - 240V, 50/60Hz

Type	PK	Cat. No.
CryoMill	1	**9.739 299**

Please order Autofill, grinding jars and grinding balls separately.

1 Filter units, PES membrane

NEW!

These bottle-top filter units are ideally suited for the separation or purification of samples which are contained in large volumes. The units are available with either 0.22µm or 0.45µm pore sizes and 3 different volumes (250, 500 and 1000ml).
Features:
- Bottle-top filter and reservoir bottle are included
- Light weight and stable wall construction
- Large knurls on the reservoir bottle cap for easy screwing
- Wide bottle mouth for efficient pouring out
- Volume graduation
- Hose connector fits multiple diameters
- Non-pyrogenic

Membrane material: Polyethersulfone (PES)

Capacity ml	Pore size µm	Neck thread mm	PK	Cat. No.
250	0.22	45	12	**6.267 180**
250	0.45	45	12	**6.267 181**
500	0.22	45	12	**6.267 182**
500	0.45	45	12	**6.267 183**
1000	0.22	45	12	**6.267 184**
1000	0.45	45	12	**6.267 185**

2 Filter units Nalgene™ Rapid-Flow™, PES Membrane, sterile

Thermo Scientific

Ideal for biological and pharmaceutical sterile filtration. PES membrane features low protein binding, low level of extractables and a high flow rate. Now available in three pore sizes: The best filter units with 0.20µm and 0.45µm pore size and new to the protection of valuable cell cultures from mycoplasma with 0.10µm pore size. Filter top and filtrate bottle are graduated. Blue color-coded collar with cellulosic vent plug side arm and quick-disconnect tubing adapter. Leakproof, sterile screw closure included for storage of sterile filtrate. Sterile, single packed. Certificate of Quality included in each full case. Lot number, catalogue number, membrane type, pore size and expiration date are printed on filter units, bottle tops and receivers for easy identification and lot traceability.

Type	Volume upper/lower part ml	Thread GL	Pore size µm	Membrane diam. mm	PK	Cat. No.
565	150/150	45	0.10	50	1	**9.046 022**
568	250/250	45	0.10	50	1	**9.046 024**
566	500/500	45	0.10	75	1	**9.046 023**
565	150/150	45	0.20	50	1	**6.302 336**
568	250/250	45	0.20	50	1	**6.228 218**
566	500/500	45	0.20	75	1	**6.227 381**
569	500/500	45	0.20	90	1	**6.225 298**
567	1000/1000	45	0.20	90	1	**6.229 041**
165	150/150	45	0.45	50	1	**7.047 785**
168	250/250	45	0.45	50	1	**7.047 791**
166	500/500	45	0.45	75	1	**7.047 787**
169	500/500	45	0.45	90	1	**7.047 793**
167	1000/1000	45	0.45	90	1	**7.047 789**

Further filter units please see page 691.

E & OE.

1 LLG-Analytical funnels, sterile

NEW!

LLG-Analytical funnels are an all in one system used for the filtration of microbiological liquid samples. After filtration, the nitrocellulose membrane can be removed and transferred to a Petri dish for further analysis. No need for flaming or sterilization reduces the testing time up to 70%. These 100ml units are suited for monitoring contaminants in all types of samples, from raw materials to finished products. Adapter for use with a manifold is included.

Capacity ml	Diam. mm	Pore size µm	Colour Filter / Grid	PK	Cat. No.
100	47	0.45	white / black	50	**6.268 176**
100	47	0.45	white / black*	50	**6.268 177**
100	47	0.20	white / black	50	**6.268 178**
100	47	0.20	white / black*	50	**6.268 181**
100	47	0.45	black / white	50	**6.268 179**
100	47	0.45	black / white*	50	**6.268 180**

*single packed

2 LLG-Microbiological Monitors, sterile

NEW!

LLG-Microbiological monitors provide a ready-to-use solution for the filtration of liquid samples. The nitrocellulose membrane is fixed to the unit. No need for flaming or sterilization reduces the testing time up to 70%. These 100ml units are suited for monitoring contaminants in all types of samples, from raw materials to finished products. The filtration unit easily converts to a Petri dish, which can be labeled and incubated for further analysis. Adapter for use with a manifold is included.

Capacity ml	Diam. mm	Pore size µm	Colour Filter / Grid	PK	Cat. No.
100	56	0.45	white / black	50	**6.268 182**
100	56	0.45	black / white	50	**6.268 183**
100	56	0.80	black / white	50	**6.268 184**
100	56	0.20	white / black	50	**6.268 185**
100	47	0.45	white / black	50	**6.268 186**
100	47	0.45	white / black*	50	**6.268 187**
100	47	0.45	black / white	50	**6.268 188**
100	47	0.80	black / white	50	**6.268 189**

*single packed

3 Biosart®100 monitors

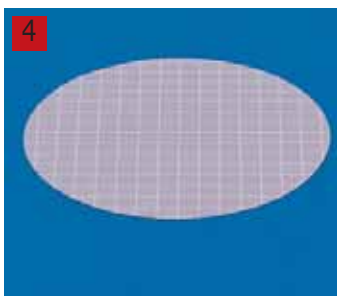
Sartorius

Filtration unit for use with a Sartorius vacuum manifold or direct attachment to a special vacuum pump. Biosart® 100 Monitors have been specifically designed for the microbiological testing of pharmaceuticals, food, beverages, water and other liquids. These sterile disposable units with built-in membrane filter and cellulose pad are ready to use. After filtration, just remove the 100ml funnel to convert the monitor into a petri dish. Culture media for wetting the pad are available in individually sterilised, convenient plastic ampoules. Biosart® 100 Monitors are ready to use filter units designed to fit onto the receivers of a vacuum manifold. For use with Biosart® 100 culture media.

Type	Diam. mm	Pore size µm	Colour Filter / Grid	PK	Cat. No.
K	47	0.45	White / Black	48	**9.049 300**
K	47	0.45	Grey / White	48	**9.049 315**
ACK	47	0.20	White / Black	48	**9.049 311**
ACK	47	0.45	White / Black	48	**9.049 312**
ACK	47	0.45	Green / Dark green	48	**9.049 313**
ACK	47	0.45	Grey / White	48	**9.049 304**
Adapter for BioSart	55		-	1	**9.049 320**

ACK= individually sterile packed. K= sterile.

4 Membrane filters Type 13005/13006, series



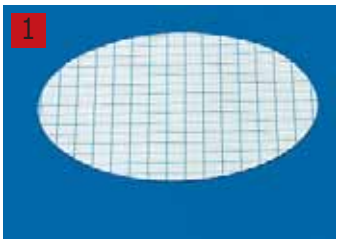
Sartorius

Cellulose nitrate. Grey membranes (black after wetting) with white grid. For detection of yeasts and moulds, particle analysis and microscopy.

Type	Pore size µm	Diam. mm	Description	PK	Cat. No.
13005	0.65	47	sterile	100	**9.054 122**
13006	0.45	47	sterile	100	**9.054 132**
13006	0.45	50	sterile	100	**9.054 133**
13006	0.45	50	non-sterile	100	**9.054 139**

Other types available on request.

1



1 Membrane filters, gridded Type 13806

Cellulose nitrate. Sterile, individually packed. Green with dark green grid. Optimal contrast to light or white bacteria colonies when colony counting. *Sartorius*

Type	Pore size µm	Diam. mm	PK	Cat. No.
13806	0.45	47	100	**9.054 202**
13806	0.45	50	100	**9.054 203**

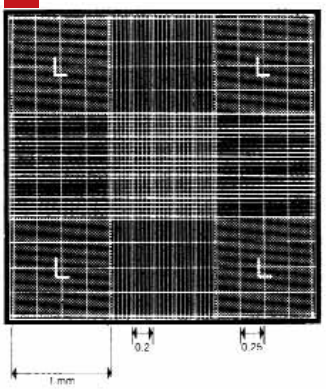
2

2 Filter funnel, Biosart®250

For microbiological and analytical quality assurance in industry. 250ml sterile plastic funnels reduce process time in colony and particle analysis. For use with Sartorius membrane filters and Sartorius cardboard culture plates. *Sartorius*
Note: BioSart 250 funnels can also be adapted to fit single filter holders or filtration manifolds.

Type	PK	Cat. No.
BioSart 250 disposable funnel, sterile	50	**9.049 340**
BioSart 250 disposable funnel, sterile, individually packed	50	**9.049 341**

3



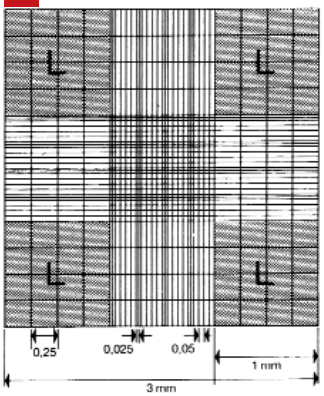
3 Counting chamber, Improved Neubauer, bright line

NEW!

Bright line. With double ruling. Calibratable. Same counting grid as the Improved Neubauer cell, but with rhodium coated chamber base. Rulings are engraved into the Rhodium layer and appear bright under normal microscope settings. By altering the contrast it is possible to reverse the image under the microscope to make the rulings appear brighter or darker as required. CE-marked according to IVD 98/79 EG. *BRAND*

Description	PK	Cat. No.
Without snap-on clips	1	**9.161 079**

4



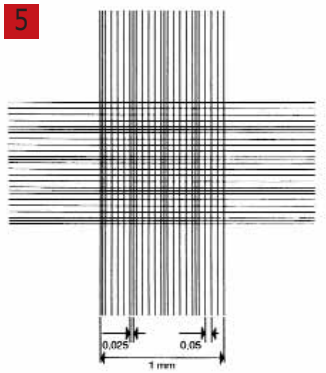
4 Counting chamber, Neubauer

NEW!

With double ruling. Without snap-on clips. Calibratable. *BRAND*
Cell depth 0.1mm. Same ruling as Improved Neubauer, but the large square in the centre is divided into 16 squares each with a side length of 0.25mm. Unlike the more modern Improved Neubauer counting chambers, the counting area of each group square is limited by the outermost of the triple border lines. CE-marked according to IVD 98/79 EG.

Type	PK	Cat. No.
With snap-on clips	1	**7.020 278**
Without snap-on clips	1	**9.161 086**

5



5 Counting chamber, Thoma ruling

Double ruling. Without snap-on clips. Calibratable. Cell depth 0.1mm. Grid is the same as the grid in the centre of large square in the Neubauer chamber. The area of the small square is 0.0025mm². Since the large outer squares are not included, the Thoma system is only used to count thrombocytes and erythrocytes.
CE-marked according to IVD 98/79 EG.

Type	PK	Cat. No.
Counting chamber, Thoma ruling	1	**9.161 080**

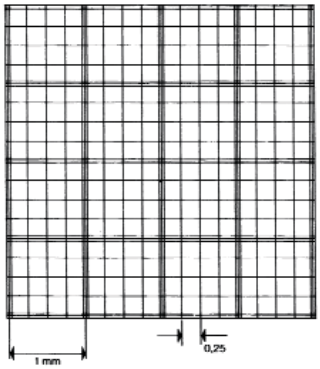
E & OE.

1 Counting chamber, Fuchs-Rosenthal

With double ruling. Without snap-on clips. Calibratable.
Cell depth 0.2mm. Grid has 16 x large 1 mm² squares. Each square is divided into 16 smaller squares each with a side length of 0.25mm and an area of 0.0625mm². These counting chambers are commonly used to count cells in cerebrospinal fluid. CE-marked according to IVD 98/79 EG.

Type	PK	Cat. No.
Counting chamber, Fuchs-Rosenthal	1	**9.161 098**

1



2 Hand tally counter

Use for counting blood cells, bacterial colonies, drops of liquid, or any repetitive event. Tallies up to 9999. Features a quick-reset knob, lens window for easy reading, and finger ring for a secure grip. Sturdy, chrome-finished, metal housing.
Dimensions: 46mm diameter x 41mm W.

Description	PK	Cat. No.
Hand tally counter	1	**6.237 971**

2

3 Tally counter, digital

NEW!

Isolab

Effective and practical counter with a sturdy, chrome finished housing. Ideal for counting blood cells, bacterial colonies, drops of liquid or any other repetitive step with a tally level up to 9999. TALLY COUNTER - "handy" Features a quick-reset knob, lens window for easy reading, and a finger ring for a secure grip.

Description	PK	Cat. No.
Tally counter	1	**6.267 411**

3

4 Colony counter eCount™

Heathrow Scientific

Multi-function electronic counter with a Sharpie® pen for marking Petri dishes to prevent missing or double-counting colonies. Light, ergonomic body is balanced for easy manipulation. For easy counting of bacteria and mould fungus colonies.
Counting contol via membrane keys.
- Incl. thumb button which allows you to use the eCount as a digital tally counter
- Count up, then count down verification
- Display the total and keep in the memory up to 32 separate counts
- Disable the counter so you can write totals and notes
- Verify each count with either a bleep or LED Flash

Type	PK	Cat. No.
Colony counter eCount™ incl. Sharpie® pen black, fine-point and stand	1	**9.521 783**
Replacement pens Sharpie® pen, black fine-point	12	**9.521 787**

4

1

1 Colony counter, ColonyCount V

Gerber

Features:
- ergonomically optimised design
- unique Light Dispose Grating (LDG)
- adjustable background and side lighting
- multifunctional graphical display
- acoustical and optical count signal
- data storage and data management
- great variety of optional accessories

Advantages:
- stressless counting of petri dishes
- consistent illumination of the counting area
- glare-free work
- user-friendly menu guided operation
- intelligent, safe and accurate counting
- complete documentation (GMP)
- adaptable to your needs

Included in delivery: ColonyCount V, high quality magnifying glass with holder, standard marker black, Wolffhügel disc grid 1cm² and 1/9 cm², user guide on CD, adapter for petri dishes ø 90mm, external power supply, Quick Guide.

Optional accessories: Thermo printer for ColonyCount V, Printercable RS232, Memory card 2GB, External counting marker, Adapting elements for different Petri dishes ø 50/60/80/90 mm, Software and cable.

Specification

Display:	Graphic-display with membrane keyboard
Standard magnifier glass:	2x magnification
Lighting:	LED side and from below (LDG)
Petri dishes:	ø up to 120mm
Nominal voltage:	100-240VAC - 50/60 Hz
Weight:	4.5kg
Warranty:	2 years

Type	PK	Cat. No.
ColonyCount V	1	**9.112 651**

2

2 Colony Counter SC6+

Stuart

- Pressure sensitive counting
- Pressure can be adjusted
- Average count facility
- Bright white energy saving LED lighting
- With BioCote antimicrobial protection
- Audible confirmation
- Choice of light or dark background
- Connectivity to printer or computer

Supplied with two Wolffhuegel graticules and dish centering adapters to facilitate use with 50mm to 90mm dishes.
A choice of magnifiers and a printer are available as optional accessories.

Please note this does not include magnifier or printer.

Specification

Lighting:	White LED array
Digital display:	3 digit LED
Count:	0 to 999
Dimensions (w x d x h):	310mm x 300mm x 140mm
Mass:	1.5kg
Electrical supply:	120 to 230V, 50/60Hz, 70W

Type	PK	Cat. No.
SC6+	1	**9.645 280**

Accessories for Colony Counter SC6+

Stuart

Description	PK	Cat. No.
Accessory printer with power supply	1	**9.950 399**
Magnifiers 1.7x	1	**9.645 281**
Magnifiers 3x	1	**6.223 318**
Wolffhuegel graticule/segmentation discs for colony counter	10	**6.238 272**
Centering adapter	2	**6.242 195**
Protective discs	5	**6.241 644**

E & OE.

1 Schuett Count Colony Counter

schuett-biotec

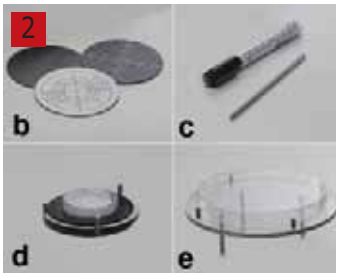
Designed for reliable and efficient counting of bacterial colonies and bacteriophage plaques growing on nutrient agar or nutrient discs/filter disks in Petri dishes. Provides ergonomic, relaxed and comfortable operation. For Petri dishes of 60, 90 or 150mm diameter. State-of-the-art, LEDlight, for absolutely glarefree illumination without blinding or stray light. No eyestrain. A so far unknown level of transparency and contrast differentiation with natural colour reproduction of the colonies is obtained. Contrast-disk is provided for counting colonies in light and dark fields when using clear or dark agar. No heating of the samples occurs. The counting impulse is triggered by marking the colonies with an ordinary felt-tip marker pen. The device is equipped with a penholder as well as a 4-digit LED-display (0 to 9999 counts) and a clearly arranged foil keypad for all controls. Average count calculation, data transfer via USB to PC, light intensity, pressure sensitivity and buzzer are adjustable as counting controls.
Items supplied: For 90mm dia. Petri dishes: adapter (transparent) for illumination from below, adapter (black/white) for illumination from side, contrast disc (black), USB-cable, marker-pen with holder.
Overall dimensions (WxDxH): 260 x 250 x 130mm
Height with integral support stand approx. 300mm

For enumeration of more than 50 Petri dishes per day, we recommend: schütt colonyQuant automatic colony counter (sample chamber, PC/laptop, software)

The schuett colonyQuant is equipped with a high-resolution auto focus/auto-zoom color camera. Evaluation of Petri dishes with agar Petri film, filters or nutrient pads, spiral plating or Hemmhof analysis. Storage of counting methods, documentation of results.

Type	PK	Cat. No.
schuett count colony counter, 100-240 V (Fig. a)	1	**9.521 940**

2 Accessories for schuett count Colony counter



schuett-biotec

Type	PK	Cat. No.
Magnifier 3 x (100mm dia.)	1	**9.521 941**
Magnifier 6-8 x (60mm dia.)	1	**9.521 942**
LED overhead lamp	1	**9.521 943**
Adapter for Petri dishes, 50 to 60mm dia. (Fig. d)	1	**9.521 944**
Adapter for Petri dishes, 140 to 150mm dia. (Fig. e)	1	**9.521 945**
Spiral-Plater Disc, black/white (Fig. b)	1	**9.521 946**
Wolffhügel Disc, black/white (Fig. b)	1	**9.521 947**
Counting needle (Fig. c)	1	**9.521 948**

3 LLG histology cassettes with detachable lid

NEW!

LLG histology cassettes with detachable lid (unassembled) for routine tissue and biopsy processing and embedding. The special design enables frequent opening and closing of the lid, as well as the easy and safe lid removal/insertion without any danger of specimen loss. The cassettes are made of Polyoxymethylene (POM) and are 100 % resistant to the chemical action of histological solvents. The cassettes have two large labeling areas on the cassette sides and a standard 45°C front writing area adaptable to most cassette labelers. The cassettes have fine square pores (0.9 x 0.9 mm) which allow an optimal fluid exchange and ensure proper drainage.

Colour	PK	Cat. No.
blue	500	**9.160 841**
green	500	**9.160 842**
pink	500	**9.160 843**
white	500	**9.160 844**
yellow	500	**9.160 845**

4 Disposable razor

NEW!

1 blade, incl. protective cap.

Heinz Herenz

Type	PK	Cat. No.
Disposable razor	100	**6.265 281**

1

1 Scalpels, disposable Cutfix®

Sterile. For cleaner, smoother, more accurate incisions. *B. Braun*

Type	PK	Cat. No.
10	10	**9.409 804**
11	10	**9.409 805**
12	10	**9.409 806**
15	10	**9.409 807**
20	10	**9.409 808**
21	10	**9.409 809**
22	10	**9.409 810**
23	10	**9.409 813**
24	10	**9.409 814**

Scalpel handles, stainless steel

NEW!

For interchangeable, disposable blades using the BAYHA interlocking system. Blades insert into the side of the handle. Scalpel handle (Cat. No. 9.409 846) and safety cap (Cat. No. 9.409 850) not suitable for sterile processing. *Bayha*

Type	Length mm	PK	Cat. No.
1, Scalpel handle	130	1	**9.409 841** 2
4, Scalpel handle	160	1	**9.409 844**
5, Scalpel with hollow handle	150	1	**9.409 845** 3
6, Scalpel handle with plastic grip	160	1	**9.409 846** 4
Safety cap		1	**9.409 850** 5

2

9.409 841

3

9.409 845

4

9.409 846

5

9.409 850

6

7

9.409 930

6 Scalpel blades, non-sterile

For scalpel handles using the BAYHA interlocking system. Sterile scalpel blades are available on request, except Cat. No. 9.409 930. *Bayha*

Type	PK	Cat. No.
11	12	**9.409 911**
15	12	**9.409 915**
16	12	**9.409 916**
18	12	**9.409 918**
19	12	**9.409 919**
20	12	**9.409 920**
21	12	**9.409 921**
22	12	**9.409 922**
23	12	**9.409 923**
24	12	**9.409 924**
26	12	**9.409 926**
27	12	**9.409 927**
28	12	**9.409 928**
29	12	**9.409 929**
Special scalpel blade acuate	12	**9.409 930** 7

8

8 Dissecting knives

Wironit CrNi 18/12. Fine pattern. With metal handle. *Hammacher*

Type	Length mm	Blade length mm	PK	Cat. No.
Rounded	135	30	1	**9.160 534**
Pointed	135	30	1	**9.160 535**
Rounded	150	20	1	**9.160 536**
Pointed	150	20	1	**9.160 537**
Rounded	130	15	1	**9.160 533**
Pointed	130	15	1	**9.160 543**

E & OE.

1 Dissecting needles

Wironit. CrNi 18/12. Length 50mm. *Hammacher*

Description	PK	Cat. No.
Lancet-shaped	1	**9.160 040**
Straight, sharp	1	**9.160 030**
Curved, sharp	1	**9.160 035**
Semi-lancet	10	**9.160 036**
Spatula	10	**9.160 037**

1

2 Dissecting needles

With plastic or metal handle.
Length 140mm. *Hammacher*

Type	Description	PK	Cat. No.
Plastic	Pointed, straight	1	**9.160 070**
Plastic	Pointed, curved	1	**9.160 072**
Plastic	Lancet shaped	1	**9.160 075**
Metal	Pointed, straight	1	**9.160 090**
Metal	Pointed, curved	1	**9.160 092**
Metal	Lancet shaped	1	**9.160 095**

2

Dissecting needle holder

Wironit CrNi 18/12. For specimen loops and dissecting needles up to max. diam. 1.0mm. *Hammacher*

Type	Length mm	PK	Cat. No.
Wironit shaft with plastic handle	240	1	**9.160 020** 3
Aluminium shaft with plastic handle	240	1	**9.160 022**
Wironit shaft with aluminium handle	170	1	**9.160 025**

3

9.160 020

4 Blood lancets Solofix®, sterile

For single use. Sharp, flexible lancet made of V2A supra steel.
Optimal insertion depth 3.8mm. *B. Braun*

Type	PK	Cat. No.
Solofix®	200	**9.409 820**

4

5 Dissecting set No. 1, small

Corrosion-free instruments with satin finish, enclosed in an imitation leather case.
Dissecting set comprises of the following:

Scalpel, pointed 35mm long
Dissecting needle
Lancet
Forceps 105mm long
Scissors, straight 115mm long
Section lifter

Type	PK	Cat. No.
Dissecting set I, small	1	**9.160 014**

5

6 Microscopic set, large

Corrosion-free instruments with satin finish, enclosed in an imitation leather case.
Dissecting set comprises of the following:

Metal scalpel, sharp 35mm long
Razor knife
Section lifter 45 x 8mm
Dissecting needle pointed
Dissecting needle lancet
Dissecting probe curved
Splinter forceps 105mm long
Microscope scissors, straight 110mm long
Microscope scissors, curved 110mm long

Type	PK	Cat. No.
Microscopic set, large	1	**9.160 012**

6

Disposal Container please see page 246.

Forceps and scissors please see page 124.

1

1 Dissecting set No. III

Corrosion-free instruments with satin finish, enclosed in an imitation leather case.
Dissecting set comprises of the following:

Incision scissors 130mm long	Metal scalpel 35mm long
Scissors pointed 110mm long	Cartilage knife
Splinter forceps 130mm long	Double-ended button probe 1mm diameter
Dissecting forceps 130mm long	Double-ended button probe 2mm diameter
Metal scalpel 30mm long	Dissecting needle pointed
	Dissecting needle lancet
Metal scalpel 40mm long	Dissecting probe curved

Type	PK	Cat. No.
Dissecting set II - large	1	**9.160 013**

2

2 Dissecting set for students

Hammacher

Comprises:
1 x scalpel handle No. 3
5 x sterile, disposable scalpel blades for above
1 pair of preparation scissors
1 pair of fine, sharp forceps
1 x lancet needle
1 x dissection needle

Type	PK	Cat. No.
HSO 130-00	1	**9.160 200**

3

3 Water bath/Tissue Float Bath 1052

GFL

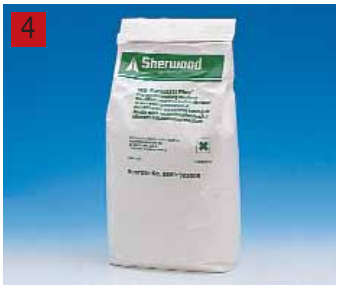
Special bath to stretch and dry cut tissue samples embedded in wax, in histological, chemical, clinical and bacteriological laboratories. Temperature range from approx. 5°C above ambient to approx. +80°C. Precise temperature regulation, consistently ±0.5°C, ensures evenly stretched cuttings which are clearly visible in the black anodized bath. The cuttings are carefully dried on the warmed rim of the bath which is also black anodized. Comfortable and safe working due to low bath height of 100mm.
Bath interior made of black anodised aluminium. Housing in powder-coated aluminium. A control thermometer is fixed to rim of the bath within a stainless steel holder. Tested according to the German Equipment Safety Law, with CE mark.

Specification

Temperature range:	up to +80°C
Interior dimensions (Dia. x H):	200 x 60mm
Exterior dimensions (Dia. x H):	280 x 100mm
Supply requirement:	230V 50/60Hz, 0.3 kW (alternative voltages are available - details on request)
Weight:	2kg

Type	PK	Cat. No.
Tissue Float Bath 1052	1	**9.905 952**
Black anodised aluminium dust cover, 1950	1	**9.905 951**

4



4 Tissue-embedding wax, PARAPLAST®

Klinika Medical

Granules for embedding tissue. PARAPLAST® PLUS additionally contains dimethyl sulphoxide which improves speed and penetration into tissue samples.
Melting point: 55 - 57°C

Type	Capacity kg	PK	Cat. No.
PARAPLAST®	1	1	**9.170 015**
PARAPLAST® PLUS	1	1	**9.170 020**

E & OE.

1 Histofluid mounting medium

Marienfeld

Histofluid is a water-clear adhesive of acrylic resins dissolved in xylene. It hardens fast and due to its optical properties suits perfectly well for embedding microscopic preparations.
Shortly after having covered a preparation it can already be examined and filed. Histofluid may also be used to firmly lock and seal bottle caps.
Further advantages are:

- long storing or temperature changes do not cause fissures or deformations in Histofluid layers
- does not turn yellowish when being exposed to UV-radiation
- does not fluoresce
- does not form bubbles
- even sensitive colorations are preserved due to its acid number = 0
- refractive index of 1.5 (nD 20°C) is adjusted to the microscope slide and cover glass
- water-repellent and dissolves in, for example, xylene, acetone, chloroform, dioxan and toluol
- can be stored in sealed bottles for an unlimited period
- filled into special bottles designed for hazardous materials and bearing the UN code

Due to its solvent contents Histofluid is flammable and, therefore, considered as hazardous. So it has to be specially packed and shipped according to the international transport regulations. Before ordering please carefully check your country's import regulations and ensure a smooth transport according to the IMO (International Maritime Organization). Any cost that might arise additionally for documents, reloading, returns etc. will be at your expense.

Description	Capacity ml	PK	Cat. No.
Histofluid mounting medium	500	1	**9.160 899**

2 Microscope slide drying bench, MH 6616

Electrothermal

Accepts up to 50 slides 26mm x 76mm. With built-in energy regulator for temperatures up to 100°C. Speeds up slide preparation. Slides can be placed in any position:
- On storage bars
- Against storage bars
- Flat

Heating area: 702cm²
Dimensions (WxDxH): 180 x 390 x 95mm
Supply requirement: 220V, 150W

Type	PK	Cat. No.
Microscope slide drying bench, MH 6616	1	**9.770 106**
Spare heating element	1	**9.770 108**

Reaction tubes, PP

Ratiolab

Translucent polypropylene (PP), natural colour
- tight sealing cap
- safe and easy to be opened and closed
- for centrifugation up to 30.000g

Capacity ml	PK	Cat. No.
0.5	1000	**6.085 184**
1.5	1000	**9.409 310** 3
2.0	1000	**6.510 856** 4

3

9.409 310

4

6.510 856

Reaction tubes, with attached lid

BRAND

PP. High clarity. Frosted marking area and approximate graduations. Tight fitting attached lid provides rak-free seal, yet reopens easily. Uniform lid-thickness ensures trouble-free piercing.
Can be centrifuged up to 20000 xg rcf. at 20°C for max. 20min.
Autoclavable at 121°C (2bar), acc. DIN EN 285.
BIO-CERT® products are sterile, free of endotoxins, DNA, RNase and ATP.

Capacity ml	Diam. mm	Height mm	Description	PK	Cat. No.
1.5	10.75	40.80		500	**9.409 301** 5
2.0	10.70	41.15		500	**9.409 303** 6
1.5	10.75	40.80	BIO-CERT®	450	**7.200 414**

5

9.409 301

6

9.409 303

1

1 LLG-Reaction tubes, PP

NEW!

LLG-Reaction tubes are ideally suitable for all test performances. Innovative and modern. They are available in 0.5ml, 1.5ml and 2.0ml volumes. These standard microtubes withstand high centrifugal forces, are temperature and chemical-resistant and guaranteed against leaks. An innovative and modern new generation of microtubes with new features. Perfect sealing qualities, excellent chemical stability and optimal construction materials guarantee even better resistance to centrifugal and chemical forces. Easy to open and close thanks to the improved lid geometry. For visual volume control the 1.5ml tubes are equipped with graduations at 0.5ml, 1.0ml and 1.5ml. The 2.0ml tubes have graduations at 0.5ml, 1.0ml, 1.5ml and 2.0ml. The 0.5ml tubes are without graduations.
Certified DNase-, RNase- and pyrogen free.

Non sterile, clear, in bags. Certified free of DNase, RNase, suitable for microbiology. Guaranteed metal-free.

Specifications
Autoclavability

Temperature:	121°C (250°F)
Pressure:	1.05 bar or 15 psig (pounds)
Time:	20 min or less

Centrifugation

Fixed angle rotor:	25000xg
Swing out rotor:	70000xg

Volume ml	Form	PK	Cat. No.
0.5	conical	1000	**9.409 023**
1.5	conical	1000	**9.409 024**
2.0	round	1000	**9.409 025**

2

2 Reaction tubes CapLock®, PP

Treff AG

The new CapLock® cap closure guarantees optimum tube sealing for all applications. CapLock® tubes provide enhanced sample security and stay safely closed, even in boiling water baths.

- Pyrogen-/RNase-/DNase-free, non-sterile and cleanroom-manufactured ISO Class 8
- moulded in transparent, medical grade, PP
- can be centrifuged up to 30000 x g
- autoclavable: at 1bar, 121°C for 15min
- with labelling area on cap and tube
- high chemical resistance
- graduation for an easy volume identification

Certificate of Conformity according to DIN EN 10204 2.1

Capacity ml	PK	Cat. No.
1.5	1000	**9.407 700**

3

3 Microcentrifuge tubes, PP, with lid closure

NEW!

BRAND

These new 0.5, 1.5 and 2.0ml microcentrifuge tubes are available with an additional lid closure to achieve especially effective sealing and prevent accidental opening.
- Autoclavable at 121°C (2 bar), acc. to DIN EN 285
- Centrifugeable up to 30.000xg
- Free of RNase, DNase, DNA and endotoxins
- Produced under cleanroom conditions, ISO 14 644-1, Class 8
- Made from high-quality medical-grade polypropylene
- Subdivisions for reading the approximate volume
- Frosted labelling surfaces on the lid and tube

Capacity ml	Diam. mm	Height mm	PK	Cat. No.
0.5	10.00	30.00	500	**6.266 733**
1.5	10.75	40.80	1000	**6.257 318**
2.0	12.80	40.00	500	**6.266 734**

E & OE.

Micro tubes with screw caps

Screw cap micro tubes are ideal for storage of serums and blood samples, and for boiling, centrifugation, etc. *BRAND*

Quality features:
- Available in different formats, designs and quality grades.
- Micro tubes of PP and screw caps of PE or PP are precisely matched to ensure a secure seal. Available screw caps: screw cap with sealing cone, screw cap with silicone seal or tamper-evident screw cap with silicone seal.
- Cap inserts for coding, available in a variety of colors.
- Fast opening and closing with 1¼ turn of cap.
- Micro tubes with ring stands (self-standing) can be placed in suitable racks without the use of both hands.
- Micro tubes without ring stand (round bottom) withstands RCF up to 17 000g at 20°C, for 20min.
- Dimensions: outer Ø 11mm, height 47mm.

1 Micro tubes, PP, with attached screw cap, PE, with sealing cone

NEW!

PP, ungraduated, screw cap PE. Operating range: -90°C to +100°C. *BRAND*
Available separately: colored cap inserts (PP) for identification.

Capacity ml	Description	PK	Cat. No.
0.5	self-standing	1000	**6.701 485**
1.5	self-standing	1000	**7.079 677**
1.5	round-bottom	1000	**7.300 156**
2.0	self-standing	1000	**7.300 197**
2.0	round-bottom	1000	**7.510 076**

2 Micro tubes, PP, with attached screw cap, PP, with silicone seal

NEW!

PP, graduated, screw cap PP. Frosted marking area. Operating range: -196°C to +121°C. *BRAND*
Autoclavable at 121°C (2 bar), acc. DIN EN 285.
Available separately: colored cap inserts (PP) for identification.

Capacity ml	Grad. ml	Description	PK	Cat. No.
0.5		self-standing	1000	**6.802 474**
1.5	1.00	self-standing	1000	**7.070 048**
1.5	1.00	round-bottom	1000	**7.076 849**
2.0	1.20	self-standing	1000	**7.300 124**
2.0	1.40	round-bottom	1000	**7.300 580**

3 Colored cap inserts (PP) for reaction tubes

NEW!

BRAND

Colour	PK	Cat. No.
white	500	**7.079 716**
blue	500	**7.059 689**
red	500	**7.079 676**
green	500	**7.059 690**
yellow	500	**7.059 691**

1

1 Micro tubes, PP, bulk screw cap, with silicone seal

NEW!

PP, graduated, screw cap PP. Frosted marking area. Operating range: -196°C to +121°C. Autoclavable at 121°C (2 bar), acc. DIN EN 285. Sterile: DNA, DNase and RNase-free, endotoxin-free, non-mutagenic, non-toxic. Available separately: colored screw caps and colored cap.

BRAND

Capacity ml	Description	Type	PK	Cat. No.
0.5	self-standing, with lid, transparent	sterile	500	**6.401 078**
1.5	self-standing, with lid, transparent	sterile	500	**4.000 236**
1.5	round-bottom, with lid, transparent	sterile	500	**7.300 006**
2.0	self-standing, with lid, transparent	sterile	500	**7.602 492**
2.0	round-bottom, with lid, transparent	sterile	500	**7.612 290**
0.5	self-standing, without lid	sterile	1000	**4.000 234**
1.5	self-standing, without lid	non-sterile	1000	**6.801 871**
1.5	round-bottom, without lid	non-sterile	1000	**6.802 032**
2.0	self-standing, without lid	non-sterile	1000	**6.401 135**
2.0	round-bottom, without lid	non-sterile	1000	**6.401 081**
	lid, white	non-sterile	1000	**6.901 915**
	lid, blue	non-sterile	1000	**4.000 235**
	lid, red	non-sterile	1000	**6.801 872**
	lid, green	non-sterile	1000	**6.401 082**
	lid, yellow	non-sterile	1000	**6.401 134**

2

3

2 3 Microtubes, PP, detached screw-cap, PP

NEW!

Graduated, sterile (SAL 10-6) or non-sterile with tamper-evident screw cap as indicated. With frosted marking area. Operating range: -196°C to +121°C. Autoclavable at 121°C (2 bar), acc. to DIN EN 285. Sterile: DNA, DNase, and RNase-free, endotoxin-free, non-mutagenic, non-toxic.

BRAND

Capacity ml	Description	Type	PK	Cat. No.
0.5	self-standing, with cap, transparent	sterile	500	**9.284 164**
1.5	self-standing, with cap, transparent	sterile	500	**6.251 643**
1.5	round bottom, with cap, transparent	sterile	500	**6.251 644**
2.0	self-standing, with cap, transparent	sterile	500	**9.284 165**
2.0	round bottom, with cap, transparent	sterile	500	**9.284 166**
0.5	self-standing, without cap	non-sterile	1000	**9.284 167**
1.5	self-standing, without cap	non-sterile	1000	**9.284 168**
1.5	round bottom, without cap	non-sterile	1000	**9.284 169**
2.0	self-standing, without cap	non-sterile	1000	**6.251 980**
2.0	round bottom, without cap	non-sterile	1000	**9.284 170**
	Lid, transparent	non-sterile	1000	**6.266 735**
	Lid, blue	non-sterile	1000	**6.266 736**
	Lid, green	non-sterile	1000	**6.266 737**
	Lid, red	non-sterile	1000	**6.266 739**
	Lid, yellow	non-sterile	1000	**6.266 740**

We can supply this manufacturer's whole product range !

partner of the LLG Lab Logistics Group

BRAND

E & OE.

1 2 Safe-lock reaction tubes, PP

Eppendorf

- A small clasp on the patented cap locking device clips onto the rim of the tube
- Autoclavable when open (121°C, 20min.)
- Can be opened and closed easily with one hand
- With frosted labelling area.
- The clasp on the cap prevents the lid springing open accidentally (e.g. when heating)
- Excellent mechanical stability for centrifugation
- Graduated
- Safe-lock reaction vessels are also available in Eppendorf Biopur® Quality
- 0.5ml and 1.5ml capacity Safe-lock reaction vessels can be centrifuged up to 30 000 x g

Capacity ml	Colour	PK	Cat. No.
0.5	Transparent	500	**9.409 320**
0.5	Yellow	500	**9.409 354**
0.5	Red	500	**9.409 355**
0.5	Blue	500	**9.409 352**
0.5	Green	500	**9.409 353**
0.5	Amber	500	**9.409 356**
1.5	Transparent	1000	**9.409 331**
1.5	Yellow	1000	**9.409 332**
1.5	Red	1000	**9.409 333**
1.5	Blue	1000	**9.409 334**
1.5	Green	1000	**9.409 335**
1.5	Amber	1000	**9.409 336**
2.0	Transparent	1000	**9.409 341**
2.0	Yellow	1000	**9.409 342**
2.0	Red	1000	**9.409 343**
2.0	Blue	1000	**9.409 344**
2.0	Green	1000	**9.409 345**
2.0	Amber	1000	**9.409 346**
0.5	Assorted colours	500	**9.409 357**
1.5	Assorted colours	1000	**9.409 358**
2.0	Assorted colours	1000	**9.409 359**

Eppendorf Tubes® 5.0 ml

NEW!

Eppendorf

- Ergonomic operation: Simple, practical and ergonomic single-hand operation. Large labelling area.
- Lid design: Hinged lid for minimized sample evaporation during storage and incubation in a wide range of temperatures from -86°C to 80°C
- Material: Exceptionally high-quality, transparent polypropylene, free of plasticizers, biocides or mold release agents, for reliable test results
- Certified purity: Available in lot-tested and certified Eppendorf Quality, PCR clean, Sterile and Eppendorf Biopur® purity levels
- Centrifugation safety: Maximum safety and stability for centrifugation up to 25 000 × g and fast and efficient protocols.
- Conical shape: Compatible with accessories for conical 15 mL tubes - many existing adapters and racks can be used.
- Sample recovery: Available in Eppendorf LoBind® material for maximum recovery of valuable samples

From 80°C on, please use the Tube Clip opener Cat. No. 9.409 294

Description	Package contents	PK	Cat. No.
Eppendorf Tubes® 5.0 mL, Eppendorf Quality™	2 bags of 100	200	**9.409 277** 3
Eppendorf Tubes® 5.0 mL, PCR clean	2 bags of 100	200	**9.409 278**
Eppendorf Tubes® 5.0 mL, Sterile	10 bags of 20	200	**9.409 279**
Eppendorf Tubes® 5.0 mL, Biopur®	bag of 50, single packed	50	**9.409 288**
Eppendorf Protein LoBind Tube, PCR clean	2 bags of 50	100	**9.409 289**
Eppendorf DNA LoBind Tube, PCR clean	4 bags of 50	200	**9.409 290**
Eppendorf Tubes® 5.0 mL, Eppendorf Quality™, amber (light protection)	2 bags of 100	200	**6.265 214** 4
Tube Clip, Eppendorf Quality™		10	**9.409 294** 5

3

9.409 277

4

6.265 214

5

9.409 294

1

1 Eppendorf Tubes® 5.0 mL Starter Pack, PCR clean

NEW!

Eppendorf

Eppendorf Tubes 5.0 mL are the perfect option for convenient and safe processing of medium sample volumes between 2.0 mL and 5.0 mL. The tubes offer great advantages for many applications, and thanks to comprehensive accessory components, they may be easily integrated as a complete system into your lab routine.

The Starter Pack comprises:
- 400 Eppendorf Tubes 5.0 mL, PCR clean (Certified purity grade)
- 8 universal adapters for rotors with bores for 15 mL conical tubes
- 2 Tube Racks 5.0 mL (16 spaces; white)
- free of human DNA, free of DNase and RNase, free of PCR inhibiting agents.
- For PCR preparations or any reactions where DNase or RNase could interfere with the reaction or analysis.

Description	PK	Cat. No.
5.0 mL Starter Pack, PCR clean	1	**9.409 291**

2

2 Standard reaction tubes, 3810 X, PP

Eppendorf

- Flat, frosted cap and marking patch on the body of the tube provide generous space for labelling
- Simplified opening and closing due to improved neck/cap geometry
- Graduated from 0.1 to 1.5ml on the tube body
- Autoclavable when open (at 121°C for 20mins.)
- Can be centrifuged up to 30000 xg in fixed angle rotors (up to 70000 xg in swing-out rotors)
- Compatible with Micropestle

Capacity ml	Colour	PK	Cat. No.
1.5	transparent	1000	**9.409 317**
1.5	blue	1000	**9.409 337**
1.5	yellow	1000	**9.409 338**
1.5	green	1000	**9.409 339**
1.5	red	1000	**9.409 347**

3

3 DNA LoBind Tubes

Eppendorf

- less than 1% loss of DNA/RNA at low concentrations and critical conditions (high salt, short DNA-fragments)
- no surface coating, e.g. silicone
- free of DNA, DNase, RNase and PCR inhibitors (PCR clean)
- novel PP, manufactured under optimized conditions
- available as 0.5ml, 1.5ml and 2.0ml Safe-Lock tubes
- highly transparent
- excellent centrifugation durability (up to 18000xg)

Capacity ml	PK	Cat. No.
0.5	250	**9.409 324**
1.5	250	**9.409 326**
2.0	250	**9.409 327**

4

4 Protein LoBind Tubes

Eppendorf

- minimum protein loss (less than 3%, BSA 1µg/ml)
- no surface coating, e.g. silicone
- free of DNA, DNase, RNase and PCR inhibitors (PCR clean)
- novel PP manufactured under optimized conditions
- available as 0.5ml, 1.5ml and 2.0ml Safe-Lock tubes
- highly transparent
- excellent centrifugation durability (up to 18000xg)

Capacity ml	PK	Cat. No.
0.5	100	**9.409 328**
1.5	100	**9.409 329**
2.0	100	**9.409 330**

E & OE.

1 2 Safe-lock reaction tubes, Biopur®, sterile

Eppendorf

Comply with the exacting requirements set by the medical, pharmaceutical and food industries, molecular biology and cell technology.
- Sterile
- Free from pyrogens, RNase, DNA and ATP
- Independently checked and certified by an external laboratory.
- Individually blister-packed

2

Capacity ml	PK	Cat. No.
0.5	50	**9.283 516**
1.5	100	**9.283 517**
2.0	100	**9.283 518**

3 Micro test tubes and racks, PP, 1.2 ml

BRAND

Suitable for biological examination, e.g. PCR, cell uptake studies, RIA, EIA, etc.
Functional design for storing, freezing and transporting reagents and samples.
Compatible with standard microtitre plates and suitable for work with multi-channel pipettes.

Properties:
- 8 x 12 configuration
- Alphanumeric identification system
- Tubes and rack are autoclavable at 121°C (2 bar), according to DIN EN 285
- Tube dimensions:8.8mm external Ø, height 45mm
- Suitable for storage up to -80°C
- Test tube capacity 1.2ml (1.1ml when capped)
- Individual tube or 8-tube strips available
- With PE cap (not autoclavable)

Type	PK	Cat. No.
Rack with 96 single test tubes, non-sterile, PP	10	**9.407 605**
Rack with 12 x 8-tube strips, non-sterile, PP	10	**9.407 606**
Test tubes, single, non-sterile, loose, PP	960	**9.407 607**
8-tube strips, non-sterile, loose, PP	120	**9.407 608**
Lid, single, non-sterile, loose, PE	960	**9.407 609**
8-cap strip, non-sterile, loose, PE	120	**9.407 610**
Rack with grid, non-sterile (empty), PP	10	**9.407 611**

4 96-tube Racks and accessories, for use with robots

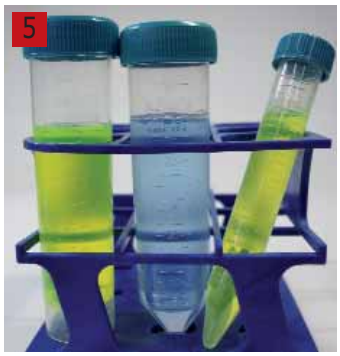
BRAND

Tubes and rack are autoclavable at 121°C (2 bar), acc. DIN EN 285. Cover mat/strips (TPE) not autoclavable. Tubes, racks, and lids can withstand temperatures as low as -80°C.
The seal of the tubes is pressure-tested. Thanks to the stable connection between the mounting plate and the racks, the stackable ANSI/SLAS racks are especially well-suited for use with robots and other automated dispensing systems. Coded tubes (A1 - H12) and rack sides suitable for barcode labels simplify sample organization.

Description	Material	PK	Cat. No.
Rack with lid for 0.65 ml tubes, empty	PP	50	**4.007 903**
Rack with lid for 1.2 ml tubes, empty	PP	50	**6.240 089**
Rack with lid with 96 coded 0.65 ml tubes	PP	50	**4.007 904**
Rack with lid with 96 coded 1.2 ml tubes	PP	50	**4.007 905**
Refill unit of 96 coded 0.65 ml tubes	PP	50	**4.007 906**
Refill unit of 96 coded 1.2 ml tubes	PP	50	**4.007 907**
Single 0.65 ml tube without coding	PP	5000	**4.007 908**
Single 1.2 ml tube without coding	PP	5000	**6.237 017**
Strip of 8 lids, piercable	TPE	1000	**6.237 016**
Cover mat for 96 tubes, piercable	TPE	100	**4.007 909**

5 LLG-Centrifuge tubes, PP

Polypropylene tubes with very good thermal, mechanical and chemical stability. Sterile tubes fitted with screw-on closure. Packed in boxes or bags. With graduations and labelling area. Cytotoxicity-free, DNase/RNase- and human DNA-free.
Centrifugation capacitiy (Max. RCF): 6000 x g



Capacity ml	Diam. mm	Height mm	Form	Description	PK	Cat. No.
15	17.0	120	conical	sterile, single packed	50	**9.316 062**
15	17.0	120	conical	non-sterile	500	**9.316 063**
50	30.0	120	conical	sterile, single packed	50	**9.316 064**
50	30.0	120	conical	non-sterile	500	**9.316 065**
50	30.0	120	with rim	sterile, single packed	50	**9.316 067**
50	30.0	120	with rim	non-sterile	50	**4.008 506**

Further Centrifuge tubes - please see page 644.

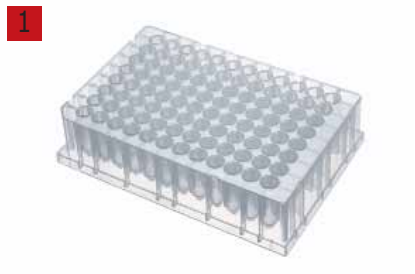
LLG Deep well plates, 96 well, PP

NEW!

- Cut-away corner for orientation
- Resistant to DMSO and low temperatures (-196°C)
- Autoclavable (121°C)
- Virgin polypropylene, certified RNase, DNase and endotoxin free

Description	Capacity µl	Colour	PK	Cat. No.	
96 Well Storage Plate, round caps, with V-Bottom	800	transparent	50	**9.407 508**	1
96 Deep Well Storage Plate, round caps, with U-Bottom	1200	transparent	50	**9.407 509**	2
96 Deep Well Storage Plate, square caps, with V-Bottom	2200	transparent	50	**6.263 838**	
96 Deep Well Storage Plate, square caps, with U-Bottom	1200	transparent	50	**7.608 837**	
96 Deep Well Storage Plate, square caps, with U-Bottom	2200	transparent	50	**9.407 511**	3

1



9.407 508

2

9.407 509

3

9.407 511

4

4 LLG-Deep well plates, 384-well, PP

- 384 square wells
- pyramidal well bottom for optimal sample retrieval
- raised rims for optimal sealing and reduced risk of cross-contamination
- raised rims on the corners to protect edges of seals
- chemical resistant (e.g. against DMSO, Phenol, Chloroform)
- autoclavable (121°C)
- Virgin polypropylene, certified RNase, DNase and endotoxin free

Description	Capacity µl	PK	Cat. No.
384 Well Storage Plate, with V Bottom	120	50	**9.407 510**
384 Well Storage Plate, with V Bottom	300	50	**9.407 512**

5

5 Deep well plates

NEW!

BRAND

Developed for a range of uses, e.g. High-Throughput Screening (HTS), general analysis which requires a master reservoir plate, cell and tissue culture, sample storage, etc.
Deep well plates can be used with all leading robotic systems and other autosampling devices.

Properties:
- Capacities: 96 well: 0.5ml, 1.1ml, (1ml with lid), 1.2ml or 2.2ml (2ml with lid), 384 well: 0.3ml
- U-bottom wells
- Low Profile and Standard
- 96 well: 12 x 8 array, 384 well: 24 x 16 array
- High chemically-resistant polypropylene (e.g.: against DMSO, phenol, chloroform)
- ANSI/SLAS format
- Alphanumeric well coding
- Plates suitable for freezing down to -80°C (PP) or -20°C (PS)
- One notched corner ensures correct orientation.
- Stackable
- DNA-, RNase-, DNAse -free

Description	PK	Cat. No.
Deep well plate, 1.2 ml, 96 well, PP, non-sterile, low profile	50	**4.007 852**
Deep well plate, 1.2 ml, 96 well, PP, non-sterile, high wells	32	**9.407 624**
Deep well plate, 0.3 ml, 384 well, PP, non-sterile, standard	48	**9.407 622**
Deep well plate, 0.5 ml, 96 well, PP, non-sterile, standard	48	**9.407 618**
Deep well plate, 1.1 ml, 96 well, PP, non-sterile, standard	24	**9.407 614**
Deep well plate, 1.1 ml, 96 well, PS, non-sterile, standard	32	**9.407 619**
Deep well plate, 2.2 ml, 96 well, PP, non-sterile, standard	24	**9.407 615**

E & OE.

Deep-well plate system, riplate®

NEW!

Ritter GmbH

riplate® round wells - Standard in Multifunction
Raised wells reduce the risk of cross-contamination and increase the security of hot sealing or sealing with adhesive foils. Riplate® 1ml is ideal for use in a thermocycler or for defrosting of samples in a hot-water bath. The U-shaped well bottom reduces the death-volume.

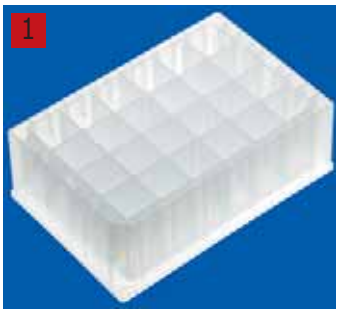
riplate® square wells - For a Maximum in Capacity
riplate® SW have been developed for optimal use of capacity when it comes to sample storage. Due to the SBS-format the outside dimensions of Riplate® are given. Form follows function: the construction of cavities is crucial for a maximum absorption of liquids.

riplate® medio - Saves 50% of Storage Capacity
Due to the compact construction of Riplate® medio less than 50% stacking size is needed. Higher well rims allow an airtight closure or sealing of Riplate® medio. The alphanumeric marking allows registration and identification of single assays.

riplate® 384 - Optimized for Smaller Volumes
Available in PS and PP for automated screening and storage systems. Alphanumeric marking for identification of samples. Round cavities for reduced capillary forces. With flat well-bottom - ideal for microscopic and optical applications.

Field of application: screening, sample storage et al. Ritter Riplate® systems are in line with the SBS-standard and are suitalbe for automation systems with corresponding closing- and sealing-mechanism.

1



7.635 031

2

9.284 259

Type	PK	Cat. No.	
Round well 96, PS - 1ml, U-shaped well-bottom	20	**9.284 250**	
Round well 96, PP - 1ml, U-shaped well-bottom	20	**9.284 251**	
Round well 96, PP - 2ml, U-shaped well-bottom	20	**9.284 300**	
Square-well 96, PP - 2ml, U-shaped well-bottom	20	**9.284 252**	
Cap mat for Square well 96, 2ml	100	**9.284 209**	
Square-well 48, PP - 5ml, V-shaped well-bottom	20	**9.284 260**	
Cap mat for Square well 48, 5ml	100	**9.284 228**	
Square-well 24, PP - 10ml, V-shaped well-bottom	20	**7.635 031**	1
384-well Plate PP	100	**9.284 256**	
384-well Plate PS, clear	100	**9.284 257**	
384-well Plate PS, white	100	**9.284 258**	
384-well Plate PS, black	100	**9.284 259**	2
Deep-well 96, PP - 1.0ml medio	32	**9.284 295**	
Deep-well 96, PP - 0.5ml medio	20	**9.284 296**	
Square-well 96, PP - 2ml, sterile	10	**9.284 297**	
Square-well 48, PP - 5ml, sterile	10	**9.284 298**	
Square-well 24, PP - 10ml, sterile	10	**9.284 299**	

3 LLG-Sealing mats for Deep well plates, 96-well

NEW!

- for sample storage
- not DMSO resistant
- alphanumeric grid
- thermoplastic elastomer
- flexible with end tabs
- with round or angled nodules

3

Description	For	PK	Cat. No.
with round nodules, not piercable, autoclavable	9.407 508 / 9.407 509	50	**9.407 513**
with angled nodules, not piercable, autoclavable	9.407 511 / 7.608 837 / 6.263 838	50	**9.407 517**
with angled nodules, piercable, not autoclavable	9.407 511 / 7.608 837 / 6.263 838	50	**7.659 384**

4 Sealing mats

BRAND

Cover mats reduce the maximum volume of wells, but improve sealing and reduce sample evaporation. Adhesive sealing films can also be used.

4

Description	PK	Cat. No.
Cover mat for 0.3 ml 384-well plates (standard), silicone, non-sterile	50	**9.407 623**
Cover mat for 0.5 ml 96-well plates (standard), PP, non-sterile	50	**9.407 621**
Cover mat for 1.1 ml 96-well plates (standard), mod. PE, non-sterile	24	**9.407 616**
Cover mat for 1.2 ml 96-well plates (low profile), TPE, non-sterile	50	**4.007 853**
Cover mat for 2.2 ml 96-well plates (standard), EVA, non-sterile	24	**9.407 617**
Sealing foil, gas-permeable, non-sterile	100	**9.407 620**

1 LLG-Disposable plastic cells, PS

The new generation of cuvettes with clearly improved, photometric properties. The new optimized shape and narrow wall thickness of the cuvettes provides increased heat transfer resulting in more constant sample temperatures during photometric measurements.

- Cavity sorted
- Glass clear polystyrene (PS)
- Applicable wavelength range 340nm to 900nm
- Very low variation of extinction values
- Excellent optical transmission range
- Path length 10mm
- Overall dimensions 12.5mm x 12.5mm x 45mm
- Styrofoam racks: 100 cuvettes in a styrofoam box with cover

Description	Capacity ml	Path length mm	Material	Operating range nm	PK	Cat. No.
Macro	4.0	10.0	PS	340 to 900	100	**9.406 011**
Semi-micro	1.6	10.0	PS	340 to 900	100	**9.406 012**

2 Disposable cuvettes

Kartell

Disposable cuvettes for spectroscopy, in optical-quality PS and UV grade PMMA with optical windows for optimum transmittance when using wavelengths from 340nm to 800nm (PS) and from 280nm to 800nm (PMMA). Moulding and quality control determine the reproducibility of cuvettes. Kartell cuvettes are strictly controlled and varations should be within the range ±1% absorption. This is the vital when batch analysis is being undertaken. Dust proof packaging: 100 pcs in expanded polystrene box with lid, 5 boxes in inner carton and 12 inner cartons (60 boxes) per case.

Description	Path length mm	Material	Capacity ml	PK	Cat. No.
Standard cuvettes	10.0	PS	4.5	100	**9.406 431**
Semi-micro cuvettes, low form	10.0	PS	1.5	100	**9.406 432**
Semi-micro cuvettes, high form	10.0	PS	2.5	100	**9.406 433**
Standard cuvettes, 4 clear faces	10.0	PS	4.5	100	**9.406 434**
Standard cuvettes	10.0	PMMA	4.5	100	**9.406 435**
Semi-micro cuvettes, high form	10.0	PMMA	2.5	100	**9.406 436**
Semi-micro cuvettes, low form	10.0	PMMA	1.5	100	**9.406 437**
Standard cuvettes, 4 clear faces	10.0	PMMA	4.5	100	**9.406 438**

3 Macro and semi micro cuvettes

BRAND

Sorted by mould cavity number. PMMA or PS.
What does "sorted by mould cavity number" mean? Injection moulds which produce 8 cells in one cycle have 8 cavities. For serial analysis only cells with the same cavity number should be used, to minimise cell-to-cell variation.
Quality characteristics:
- Minimal extinction value variation.
- Optically perfect transmission range
- Recessed window, to protect against scratches
- Arrow head marking shows the direction of transmission.

Advantages to user:
- Ideal for kinetics measurements
- 1000 cells from the same cavity in each pack
- Practical packaging: clear, re-closable.

Polymethylmethacrylate (PMMA) cuvettes
Typical operating range: from 300nm to 900nm.
Standard deviation at 320nm ±0.004 extinction units.

Polystyrene (PS) cuvettes
Typical operative range: from 340nm to 900nm.
Standard deviation at 360nm ≤ ±0.005 extinction units.

Dimensions: 12.5mm x 12.5mm x 45mm
Window: Macro cell 10mm x 35mm
Semi micro cell 4.5mm x 23mm

Description	Path length mm	Material	Volume ml	Operating range nm	PK	Cat. No.
Macro	10.0	PMMA	2.5 to 4.5	300 to 900	100	**9.406 111**
Semi-micro	10.0	PMMA	1.5 to 3.0	300 to 900	100	**9.406 115**
Macro	10.0	PS	2.5 to 4.5	340 to 900	100	**9.406 110**
Semi-micro	10.0	PS	1.5 to 3.0	340 to 900	100	**9.406 114**

E & OE.

1 Accessories for standard and semi-micro cuvettes

Kartell

Description	Material	PK	Cat. No.
Disposable stirrer	PS	100	**9.406 439**
Caps for cuvettes	PE-LD	1000	**9.406 440**
Cuvette holder for 12 cuvettes	PE	1	**9.406 441**

2 Plastic disposable UV-Cuvettes for the UV/VIS range

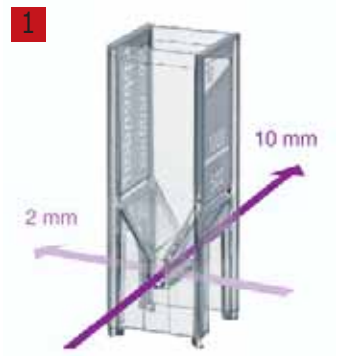
BRAND

UV-transparent plastic Brand cuvettes replace fragile glass or quartz cuvettes in many applications that were previously beyond the range of plastic cuvettes. Designed for single use, they eliminate time-consuming washing, and the cross-contamination risk associated with washing and re-using cuvettes. Their very high chemical resistance allows use with most polar solvents, acids and alkalis (e.g. Acetone, Butanone, DMF, hydrochloric acid). The UV-uvette micro has a working range from 230nm - sample volumes as small as 70 µl are sufficient.
The UV-Cuvette is also available in macro and semi-macro sizes for applications from 230nm to 900nm.

- Specially designed for photometric determination of proteins, ssDNA, dsDNA, TNA and oligonucleotides in the UV range.
- Ideally suited for measurements at 260 nm, 280 nm and in the visible range.
- Two different centre heights (8.5 mm and 15 mm) allow use in most commercial spectrophotometers without adapters (for more information please visit the Brand website, www.brand.de).
- Round caps provide a tight seal and allow storage of samples at -20°C.
- Coloured caps are available for easy sample identification.
- Grouped by mould cavity number to minimize extinction value variation.
- Recessed windows protect against scratching.
- Arrow indicates optical path orientation.

Description	Path length	Capacity	Operating range	PK	Cat. No.
	mm	µl	nm		
UV micro cuvette (centre height 8.5 mm)	10,0	70 to 850	230 to 900	100	**9.406 120**
UV micro cuvette (centre height 8.5 mm)	10,0	70 to 850	230 to 900	500	**9.406 121**
UV micro cuvette (centre height 15 mm)	10,0	70 to 550	230 to 900	100	**9.406 122**
UV micro cuvette (centre height 15 mm)	10,0	70 to 550	230 to 900	500	**9.406 123**
Cap for UV micro cuvette, blue				100	**9.406 124**
Cap for UV micro cuvette, yellow				100	**9.406 125**
Cap for UV micro cuvette, green				100	**9.406 126**
Cap for UV micro cuvette, orange				100	**9.406 127**
UV macro cuvette	10,0	2.5ml to 4.5ml	230 to 900	100	**9.406 119**
UV semi-micro cuvette	10,0	1.5 to 3.0ml	230 to 900	100	**9.406 118**

1



2

1 2 UV cuvette UVette®

Eppendorf

The plastic material of the UVettes® provides a transparency range of 220nm to 1600nm. It is possible to carry out measurements in the UV range as well as the entire VIS range. Pipetting can be monitored clearly through the crystal-clear plastic and is always completely bubble-free, even the minute 50µl sample volume. The design of the cuvette incorporates a funnel-shaped base, which prevents the capillary effect, and ensures that the liquids constantly remain in the centre of the measuring area.

Product features:
- Suitable for measuring small volumes, min. 50µl
- Individually blister-packed for sterile work
- DNA-/RNase- and protein-free
- Choice of two optical path lengths: 2mm and 10mm
- UV- and VIS-transparent between 220nm and 1600nm
- Volume markings at 500µl and 1000µl
- Total transparent material with outstanding surface properties
- Optimal filling guaranteed by tapered cuvette base
- Recessed optical window prevents scratches
- Self-standing design
- Marking possible on frosted gripping surface
- Optimal use in BioPhotometer and in most common spectrophotometers, using adapters.

Description	PK	Cat. No.
UVettes® , 80 x individually wrapped, disposable cells for direct use in BioPhotometer, path length 2 and 10mm	80	**9.409 392**
UVette® routine pack, Eppendorf Quality, path length 2 and 10mm	200	**9.409 398**
Starter kit, 80 x UVettes® + 1 universal adapter for photometers/spectrophotometers with beam centre height of 15 mm, convertible	1	**9.409 397**

3

6.265 212

4

6.265 213

VIS cuvettes Eppendorf®, PMMA

NEW!

Eppendorf

The Eppendorf® Vis Cuvettes are disposable cuvettes made of clear plastic with a light transmission of 300 nm to 900 nm. They are the perfect tool for applications outside of the UV range, for example, colorimetric protein assays (Bradford, Lowry, etc.), determining of the optical density of bacterial cultures (OD600 methods), kinetic and fluorescence measurements. Based on the volume you would like to measure, you can select semi-micro or macro cuvette.

Description	Path length mm	Capacity µl	Material	Operating range nm	PK	Cat. No.
Macro	10	4500	PMMA	300 -900	1000	**6.265 212** 3
Semi-micro	10	3000	PMMA	300 -900	1000	**6.265 213** 4

5

5 Cuvette rack

BRAND

Grey. PP. 16 numbered positions.
Autoclavable (121°C).

Width mm	Length mm	Height mm	PK	Cat. No.
70	210	38	1	**9.145 020**

1 HELLMANEX® III liquid

Cleaning: *Hellma Analytics*
HELLMANEX® III is an alkaline liquid concentrate used for the highly effective cleaning of glass or silica cells and other sensitive optical components. Laboratory equipment made of glass, quartz, sapphire and porcelain can also be cleaned using the solution.

Characteristics:
Hellmanex® III significantly reduces the surface tension of water. The removal of dirt particles is also assured by the good wetting action of a Hellmanex® III aqueous solution, whilst its high emulsifying and dispersing capabilities prevent the re-deposition of the loosened particles. Special surface-active substances facilitate the residue-free rinsing of the optical components once they have been cleaned.

Cleaning and Dilution:
The optimal dilution depends on several factors, such as the hardness of the water, the degree and type of contamination, the temperature, etc. The use of demineralised water improves the cleaning characteristics.

Available in 1.3kg PE-bottle.

The following treatments have been proven at a **concentration (vol%) 0.5 to 2** in practice:

Temperature°C	**Time minutes**
20-25	120-180
30-35	30-40
50-60 (quarz only)	10-15
70-80 (quarz only)	< 5

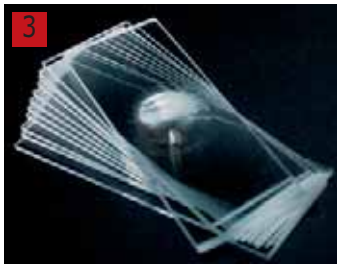
Type	Capacity Litres	PK	Cat. No.
HELLMANEX® III	1	1	**9.190 985**

2 Microscope slides

According to ISO 8037/I. Prewashed and polished. Nominal thickness 1mm. Size 76 x 26mm. *Menzel*
Also available with 20mm, frosted, writing patch at one end.

Description	Edge finish	Type	PK	Cat. No.
Extra white	Cut	Without frosted end	50	**9.161 110**
Extra white	Cut	With frosted end	50	**9.161 145**
Extra white	Ground 45°	Without frosted end	50	**9.161 120**
Pure white	Cut	Without frosted end	50	**9.161 130**
Pure white	Ground 45°	Without frosted end	50	**9.161 140**
Pure white	Ground 90°	Without frosted end	50	**9.161 141**

3 Microscope slides with cavities



Dimensions: 76mm x 26mm x 1.2mm to 1.5 mm, with cavities approx. 15mm to 18mm diameter and approx. 0.6 to 0.8 depth. *Menzel*

Number of cavities	Colour	Edge finish	PK	Cat. No.
1	extra white glass	90° ground edges	1	**9.161 151**

4 Superfrost® Plus adhesive microscope slides

Size: 75mm x 25mm x 1.0mm. Ground edges 90°, white SuperFrost marking area. *Menzel*
A new application method provides the surface of a slide with a permanent positive charge.
Electrostatic attraction binds fresh frozen tissue sections and cytology preparations. Also available with blue, yellow or green SuperFrost marking area.

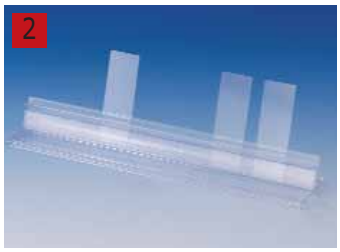
Type	Colour	PK	Cat. No.
SuperFrost® Plus	White	72	**9.161 155**

1 Superfrost® slides

Menzel

According to ISO 8037/I. With colour-coded writing patch as outlined below.
Size 76mm x 26mm. Nominal thickness 1.0mm. With cut or ground edges. With approx. 0.013mm thick coating which prevents slides sticking together and being scratched.

Edge finish	Colour	PK	Cat. No.
Cut	white	50	**9.161 161**
Cut	blue	50	**9.161 162**
Cut	pink	50	**9.161 163**
Cut	yellow	50	**9.161 164**
Cut	green	50	**9.161 165**
Ground 45°	white	50	**9.161 171**
Ground 45°	blue	50	**9.161 172**
Ground 45°	pink	50	**9.161 173**
Ground 45°	yellow	50	**9.161 174**
Ground 45°	green	50	**9.161 175**



2 Microscope slide or paper strip holder, PS

Bel-Art Products

This slide holder has a sloped groove that accepts up to 10 single or double slides standing on end. Front ledge serves as a place to dry slides. Made of durable polystyrene.

Internal dimensions (W x D x H) mm	PK	Cat. No.
250 x 50 x 30	1	**9.161 208**

3 Diagnostic slides without adhesion coating

Menzel

Material	No. of chambers	Diam. mm	Colour	PK	Cat. No.
Epoxy	1	8.0	Blue	100	**9.161 181**
Epoxy	3	14.0	Black	100	**9.161 182**
Epoxy	8	6.0	Black	100	**9.161 183**
Epoxy	10	6.7	Black	100	**9.161 184**
Epoxy	12	5.0	White	100	**9.161 185**
PTFE	1	8.0	Blue	100	**9.161 186**
PTFE	3	14.0	Black	100	**9.161 187**
PTFE	8	6.0	Black	100	**9.161 188**
PTFE	10	6.7	Black	100	**9.161 189**
PTFE	12	5.0	White	100	**9.161 190**

4 Diagnostic slides

Menzel

Material	No. of chambers	Diam. mm	Colour	PK	Cat. No.
PTFE	12	5	White	100	**9.161 200**

5 Prepared Slides

Prepared microscope slides for education and studies.
Sets of 10 slides.

Type	PK	Cat. No.
Fishes, frogs and other ambhibians	1	**9.151 850**
Lizard snakes and birds	1	**9.151 851**
Animal reproduction	1	**9.151 852**
Bacteria simple organisms	1	**9.151 854**
Plant reproduction and propagation	1	**9.151 856**
Structure of vegetable plants	1	**9.151 857**
Cell development and reproduction	1	**9.151 858**
Nanoplankton	1	**9.151 859**
Human body, normal tissues Part 1	1	**9.151 860**
Human body, normal tissues Part 2	1	**9.151 861**
The human body pathological tissues part 1	1	**9.151 862**
The human body pathological tissues Part 2	1	**9.151 863**
Animal and human parasites	1	**9.151 864**
Life in the ground	1	**9.151 866**
Animals and plants damaged by the environment	1	**9.151 868**
Set for teaching science	1	**9.151 869**
Set for teaching biology part 1	1	**9.151 870**
Set for teaching biology part 2	1	**9.151 871**

E & OE.

1 Square cover slips

Made of clear white glass. Accurate cutting free of flaws and blisters. Further thicknesses are available on request. *Menzel*

Width mm	Length mm	Thickness mm	PK	Cat. No.
15	15	0.13-0.16	200	**9.161 015**
18	18	0.13-0.16	200	**9.161 018**
20	20	0.13-0.16	200	**9.161 020**
22	22	0.13-0.16	200	**9.161 022**
24	24	0.13-0.16	200	**9.161 024**
26	21	0.13-0.16	100	**9.161 021**
32	24	0.13-0.16	100	**9.161 032**
40	24	0.13-0.16	100	**9.161 040**
50	24	0.13-0.16	100	**9.161 050**
60	24	0.13-0.16	100	**9.161 060**

2 Circular cover slips

Made of clear white glass. Accurate cutting free of flaws and blisters. Diameters as indicated. Further sizes and thicknesses are available on request. *Menzel*

Diam. mm	Thickness mm	PK	Cat. No.
10	0.13-0.16	100	**9.161 063**
12	0.13-0.16	100	**9.161 064**
13	0.13-0.16	100	**9.161 065**
14	0.13-0.16	100	**9.161 066**
15	0.13-0.16	100	**9.161 061**
18	0.13-0.16	100	**9.161 062**

3 Haemacytometer cover glasses

Officially calibrated, optically parallel cut. CE-marked. *Menzel*

Width mm	Length mm	Thickness mm	PK	Cat. No.
26	20	0.4	10	**9.161 070**
22	22	0.4	10	**9.161 072**
24	24	0.4	10	**9.161 074**

4 LLG-Cover glass forceps, self-locking

NEW!

Stainless steel 4301

Length mm	Form	PK	Cat. No.
105	Straight	1	**9.160 380**
105	Curved	1	**9.160 381**

5 LLG-Cover glass forceps, acc. to Kühne, stainless steel

NEW!

Stainless steel 4301

Length mm	Form	PK	Cat. No.
115	curved	1	**9.160 386**
130	curved	1	**9.160 387**
145	curved	1	**9.160 388**
115	straight	1	**9.160 391**
130	straight	1	**9.160 392**
145	straight	1	**9.160 393**

6 Microscope slide boxes

PP. For storing or shipping 5 thick or 10 thin slides. Sturdy design. Screw cap with fitting for sealing wire tag. When cap is open the slides protrude approximately 10mm so they can be removed easily. *Kartell*

Int. diam. mm	Height mm	PK	Cat. No.
45	90	1	**9.161 395**

1 LLG-Cavity tiles, porcelain

NEW!

Rectangular, white, glazed, with cavities as outlined below.

Number of cavities	Int. bore diam. mm	Cavity depth mm	Width mm	Length mm	Height mm	PK	Cat. No.
6	25	4	81	112	25.0	1	**6.232 575**
12	17	2	91	115	17.0	1	**6.265 001**

2 Cavity tiles, porcelain

Rectangular, white, glazed, with cavities as outlined below. *Haldenwanger*

Number of cavities	Int. bore diam. mm	Cavity depth mm	Width mm	Length mm	Height mm	PK	Cat. No.
6	36	11	80	115	12.0	1	**9.253 406**
12	20	3	85	119	6.0	1	**9.253 412**

3 LLG-Staining jars, soda-lime-glass

The Schiefferdecker Staining Jar is suitable for holding 76mm x 26mm slides horizontally. This staining jar has 10 grooves which can accommodate 20 slides back-to-back.
The Hellendahl Staining Jar is suitable for holding 76mm x 26mm slides vertically. This staining jar has 8 grooves which can accommodate 18 slides back-to-back.
The "Macro" Staining Jar is suitable for holding 20 slides with 76mm x 26mm (please order rack separately).
This Stainless Steel rack for "Macro" has 20 grooves which can accommodate 20 single slides.
Each staining jar is supplied with a glass lid.

Type	Width mm	Length mm	Height mm	PK	Cat. No.
Schiefferdecker Staining Jar	68	88	50.15 (with lid)	1	**9.163 250**
Hellendahl Staining Jar	61	63	102 (with lid)	1	**9.163 251**
"Macro" Staining Jar	88	105	78 (with lid)	1	**9.163 252**
Rack, Stainless Steel, for "Macro" jar				1	**9.163 253**

4 Staining rack, Glass

Glass. Holds microscope slides 76mm x 26mm to 50mm. (Fits trough 9.163 281 not supplied).
An accessory wire lifting handle is available.

Type	Width mm	Length mm	Height mm	PK	Cat. No.
Staining rack	30	85	45	1	**9.163 280**
Wire handle				1	**9.163 284**

5 Trough

Glass. Accepts one staining rack 9.163 280 (not supplied).

Width mm	Length mm	Height mm	PK	Cat. No.
85	105	70	1	**9.163 281**

E & OE.

1 Staining trough with rack, POM

Accepts 25 slides 76mm x 26mm. *BRAND*
Tightly fitting lid provides good protection against evaporation. Insert rack with folding handle.

To hold microscope slides	Width mm	Length mm	Height mm	PK	Cat. No.
25	88	98	52	1	**9.161 370**

2 Disposable Staining Slide Tray

Stain, rinse, and dry your slides on a single working tray. Made of a polypropylene and polyethylene blend, this rugged staining tray is an economical alternative to metal versions offering a clean and fresh working surface area every time. Up to eight slides fit comfortably onto the base and the deep well holds liquid waste up to 38ml. Two convenient pour spouts make it easy to dispose of unwanted liquid waste. Unique dark lid protects slides when used with light sensitive applications. *Heathrow Scientific*
Supplied with 4 Base Trays and 1 Lid.

To hold microscope slides	Length mm	Width mm	Height mm	PK	Cat. No.
8	305	127	29.5	1	**9.161 400**

3 Staining jar, PMP (TPX®)

Supplied with 2 lids, one complete lid for use providing evaporation-free storage of staining liquids, the other lid with an opening to allow the handle of accessory staining rack 9.161 341 to be inserted. *Kartell*
Note: Xylene can cause etching after 2 days at room temperature.

Width mm	Length mm	Height mm	PK	Cat. No.
80	100	70	1	**9.161 340**

4 Staining rack, PP

For use with staining jar 9.161 340. PP, with horizontal tray, holds 20 slides. *Kartell*

Width mm	Length mm	Height mm	PK	Cat. No.
20	86	700	1	**9.161 341**

5 Staining jar, PMP (TPX®), Schiefferdecker pattern

Accepts 20 slides 76mm x 26mm (10 pairs back to back). Transparent. *Kartell*
Complete with lid.
Note: Xylene can cause etching after 2 days at room temperature.

Width mm	Length mm	Height mm	PK	Cat. No.
70	86	51	1	**9.161 352**

6 Staining jar, PMP (TPX®), Hellendahl pattern

Accepts 16 slides 76mm x 26mm (8 pairs back to back). Transparent, with grooves. *Kartell*
Complete with lid.
Note: Xylene can cause etching after 2 days at room temperature.

Width mm	Length mm	Height mm	PK	Cat. No.
57	57	90	1	**9.161 350**

1

1 Staining jar, glass, Coplin

Coplin pattern. Glass.

Diam. mm	Height mm	PK	Cat. No.
45	105	1	**9.163 283**

2

2 Staining cylinders

Soda lime glass. With drop-on cover.

Type	Diam. mm	Width mm	Length mm	Height mm	PK	Cat. No.
Round	40			85	1	**9.163 273**
Oval		25	40	85	1	**9.163 274**
Rectangular		20	40	85	1	**9.163 275**

3

3 Staining jar, PP

Coplin pattern. With screw cap. For batch staining of 10 microscope slides, 76mm x 26mm. *VITLAB*

Height mm	Diam. mm	PK	Cat. No.
94	50	1	**9.161 386**

4

4 LLG-Microtitre shaker uni*PLATESHAKER* 1

NEW!

The LLG-uni*PLATESHAKER* 1 has been designed for accommodating and mixing a single micro plate. Due to its small footprint it can be used in working areas with limited space such as fume hoods and bio safety cabinets. It can also be used inside a cold-room. 3-years warranty.

- Digital Display with Speed and Time settings
- Variable speed from 300 to 1800rpm
- Maintenance free brushless DC motor
- Orbital Diameter of 2mm for thorough mixing
- Timer setting from 1 to 99min and continuous mode
- Universal fit, comes with interchangeable clamps for different micro plate sizes
- Comes with foam attachment for 20 x 1.5/2ml microtubes

Specifications

Type of movement:	orbital
Orbital diameter:	2mm
Speed range:	300 to 1800rpm
Motor:	Brushless DC motor
Timer:	1 to 99min, continuous
Power consumption:	15 W
Permissible ambient temperature:	4 to 40°C
Dimensions (WxDxH):	127 x 85 x 86mm
Weight:	1.4kg
Power supply:	100-230V, 50/60Hz

Type	PK	Cat. No.
uni*PLATESHAKER* 1 with EU-plug	1	**6.263 488**
uni*PLATESHAKER* 1 with UK-plug	1	**6.263 489**

E & OE.

1 Microtitre shaker PMS-1000i

1

Grant

Reliable, regulated shaking for two or four microplates. Simple screw attachments allow quick and easy fitting of any standard depth 96 or 384 well plates, holding the plate securely in place.
- direct drive
- brushless motor
- RPM set and display
- variable speed: 150rpm to 1200rpm
- orbit: 2mm
- continuous or timed operation
- integral timer: 1 min to 24 hours
- standard option for two microplates
- optional platform MPP-4 for four microplates
- ambient 4°C to 40°C

Type	Description	PK	Cat. No.
PMS-1000i	Microplate shaker	1	**9.721 074**
MPP-4	Platform for 4 micro plates	1	**9.721 026**

2 Microtitre shakers Microplate Genie®

NEW!

Scientific Industries

- Aggressive mixing speed for complete and uniform mixing in any microplate format.
- Suitable for standard SBS footprint
- Small vortexing orbit of 1.0mm for thorough mixing regardless of sample viscosity, even in 384-well plates.
- Speed and orbit combine to offer true vortexing action in each well of a microplate.
- Analog models are ideal for high speed mixing. Digital Pulse models are ideal for precise speed and time control.
- All models may be used in cold rooms and incubators for temperature sensitive applications.
- All models accept optional holders for PCR plates utilizing accessory kit (Cat. No. 6.265 696).

Specifications

Orbit:	1mm
Capacity Microplate Genie®:	1 microplate
Capacity Multi-Microplate Genie®:	up to 4 microplates or 8 with optional tray (Cat. No. 6.265 965)
Speed (Multi-)Microplate Genie® analog:	750 - 2700rpm
Speed (Multi-)Microplate Genie® digital:	500 - 2850rpm
Timer (Multi-)Microplate Genie® analog:	1 - 60 minutes/continuous
Timer (Multi-)Microplate Genie® digital:	0-99 minutes/continuous
Dimensions (WxDxH) Microplate Genie® analog:	165 x 165 x 165mm
Dimensions (WxDxH) Multi-Microplate Genie®:	335 x 240 x 165mm
Weight Microplate Genie®:	2.75kg
Weight Multi-Microplate Genie®:	3.7kg
Supply requirements:	230V 50/60Hz

Type	Connector	PK	Cat. No.
Microplate Genie® analog	EU	1	**6.265 233**
Microplate Genie® analog	UK	1	**6.265 234**
Microplate Genie® analog	CH	1	**6.265 235**
Multi-MicroPlate Genie® analog	EU	1	**6.265 237**
Multi-MicroPlate Genie® analog	UK	1	**6.265 238**
Multi-MicroPlate Genie® analog	CH	1	**6.265 239**
Microplate Genie® digital pulse	EU	1	**6.265 241**
Microplate Genie® digital pulse	UK	1	**6.265 242**
Microplate Genie® digital pulse	CH	1	**6.265 243**
Multi-MicroPlate Genie® digital pulse	EU	1	**6.263 864**
Multi-MicroPlate Genie® digital pulse	UK	1	**6.265 245**
Multi-MicroPlate Genie® digital pulse	CH	1	**6.265 246**
Accessory tray for Multi MicroPlate Genie® to enlarge capacity up to 8 microplates		1	**6.265 695**
Kit for PCR Platten for MicroPlate Genie® and Multi MicroPlate Genie®		1	**6.265 696**

2

1

1 Microtitre shaker MTS 2/4 digital

Dedicated shaker for two or four microtitre plates. Orbital movement. *IKA*

- Electronic speed regulation
- Digital timer
- Acoustic signal at end of timed period
- With attachment but without plates

Specifications

Motor rating input/output:	35/13.2W
Orbit:	3mm
Capacity:	two or four microtitre plates
Speed range:	0rpm to 1100rpm
Speed range:	Analogue scale
Timer:	1 to 99 min/ continuous
Dimensions (WxDxH):	185 x 320 x 105mm
Weight:	2.7kg
Housing IP rating to DIN EN 60529:	IP 21
Supply requirements:	230V 50/60Hz
Tested to DIN EN IEC 61010-1.	

Type	PK	Cat. No.
MTS 2/4 digital with EU-plug	1	**9.838 195**
Mains cable with CH plug	1	**6.229 999**
Mains cable with UK plug	1	**6.240 684**

2

3

BioCote

2 3 Shaker, microtitre plate, SSM5/SSL5

NEW!

- Vibrational mixing action - ideal for microtitre plates *Stuart*
- Digital selection of mixing speed
- Built-in digital timer or continuous operation
- Optional tube holders available for mixing microcentrifuge tubes

Designed for use with microtitre plates and microcentrifuge tubes. The aluminium tray is fitted with a specially designed mat that securely holds in place up to four wellplates. High speed combined with a tiny orbit creates the vibrational shaking action required for mixing the very small volumes contained in the wells or in microcentrifuge tubes. Speed is variable from 250 to 1250 rpm and is easily set via the digital display. Shaking times can be set from 1second to 9999 minutes on the built in digital timer. The unit can also be set for continuous operation. Tube holders are available as optional accessories. They fit securely onto the platform turning the unit into an effective tube mixer.
With BioCote, silver-based, antimicrobial protection.

Specifications

	SSM5 // **SSL5**
Platform dimensions (W x D):	220 x 220mm // 306 x 306mm
Number of plate positions:	4 // 8
Speed range:	250 to 1250rpm
Orbit diameter:	1.5mm // 1.5mm
Maximum load:	1kg // 2kg
Overall dimensions (WxDxH):	240 x 300 x 160mm // 360 x 420 x 160mm
Supply requirements:	230V 50 Hz, 50W // 230V 50Hz, 50W

Description	PK	Cat. No.
SSM5, shaker, microtitre	1	**9.728 850**
SSL5, shaker, microtitre	1	**9.728 853**
SSM5/1, tube holder for 1.5 ml tubes	1	**9.728 851**
SSM5/2, tube holder for 0.5 ml tubes	1	**9.728 852**
SSM5/3, tube holder for 0.2 ml tubes	1	**9.728 854**

Incubator- and Thermo shaker please see page 1308.

E & OE.

1 Mixer MixMate®

NEW!

Eppendorf

The MixMate is a compact and versatile mixer, specially designed for mixing small volumes (5 ìl to 2 ml) in numerous plate and tube formats. The fast and precisely controlled mixing movements (2DMix-Control) enable efficient and homogeneous mixing of samples in all vessel formats, allowing MixMate to be used for virtually any application. It accommodates micro test tubes, PCR plates, PCR strips, deepwell plates and MTPs. The integrated touch vortex function, with minimal hand/arm vibration transfer (Eppendorf PhysioCare Concept), completes this unique product profile. The innovative additional 2 second run timer allows vortexing of your next sample without restarting.

1

Specifications

Mixing frequency:	300 to 3000rpm
Touch vortexing frequency:	3500rpm
Adjustable mixing time:	15s to 99.5h; continuous
Mixing and vortexing radius:	1.5mm (3 mm mixing stroke)
Noise level:	< 50dB(A)
Power supply:	230V 50/60Hz

Type	Description	Dimensions (W x D x H) mm	Weight kg	Power W	PK	Cat. No.
MixMate®	incl. 3 tube holders: PCR 96; 0.5 ml; 1.5/2.0 ml	170 x 230 x 130	4.2	40	1	**9.776 660**

2 Microplate thermoshaker PHMP/PHMP-4

Grant

For 96- and 384-well plates. The PHMP is a variable speed, variable temperature microplate shaker incubator with excellent temperature uniformity across the microplate. The patented heated lid and base which completely cover the plate produce a controlled micro-environment. This is combined with powerful orbital shaking to produce the maximum yield from your incubations.
- Stability ±0.1ºC, uniformity ±0.25ºC
- Rapid heat-up
- Choice of two models with capacity for 2 microplates (PHMP) or 4 microplates (PHMP-4)
- variable speed: 250rpm to 1200rpm
- 2mm shaking orbit for effective mixing
- temperature range: amb. + 5 to 60°C
- timed operation: 1 min to 96 hours
- for 2 standard 96 or 384-well plates (max. 14mm height)

2

Type	PK	Cat. No.
PHMP	1	**9.721 033**
PHMP-4	1	**6.227 761**

LLG-Temperature block "exact", aluminium

NEW!

Suitable for both cooling and heating, universally usable, uniform temperature distribution within the block, ideal for all temperature-sensitive applications.

Aluminum blocks with conical compartments and closed bottom for easy and precise tempering of reaction tubes and PCR tubes. The precisely adapted shape of the borings and the closed bottom offer advantages compared with cylindrical drilled blocks with open bottom, such as much better heat transfer and temperature accuracy. Made of a special aluminum alloy with high thermal conductivity. Identical temperature conditions for all samples. Compact size, requiring little space. Suitable for 96-well plates, 8 or 12 strips and single tubes. Ideal for working with 8- or 12-channel pipettes. Blocks for different tube sizes and combinations of tube sizes as indicated, all working steps in one block, holes closed at the bottom and tapered to fit perfectly the respective tube sizes and offer an optimum heat exchange.

3

9.409 015

4

9.409 017

Description	PK	Cat. No.
LLG-aluminum block, 96 x 0.2 ml PCR tubes + 6 x 1.5 ml tubes	1	**9.409 015** 3
LLG-aluminum block, 36 x 0.5 ml tubes + 11 x 1.5 ml tubes	1	**9.409 016**
LLG-aluminum block, 24 x 1.5 ml tubes	1	**9.409 017** 4
LLG-aluminum block, 24 x 2.0 ml tubes	1	**9.409 018**
LLG-aluminum block, 25 x 2.0ml Cryogenic tubes with round bottom	1	**9.409 006**
LLG-aluminum block, 12 x 15.0ml Centrifuge tubes	1	**9.409 008**

1 Digital Dry Bath AccuBlock™ Mini

Labnet

AccuBlock Mini combines digital control, a fast heating microtube block and a convenient AccuRack transfer system, all in an ultra compact footprint. With a temperature range to 100°C which can be set in increments of 0.1°C, AccuBlock Mini is suitable for a range of uses in life science, molecular biology, environmental and industrial laboratories and a variety of applications including incubation, enzyme reactions, immunoassays.
- accepts up to 12 x 1.5ml tapered microcentrifuge tubes
- with thermometer well for temperature confirmation and calibration
- microprocessor controlled heating element
- easy to read 4 digit LCD display
- built in calibration mode allows end users to calibrate the bath as needed

The included AccuRack allows quick loading or unloading of all sample tubes simultaneously. It is self standing and can be used to hold samples while they are prepared for loading. Samples can also be loaded directly into the AccuBlock™ Mini without the AccuRack.

1

Specifications:

Temperature range:	Ambient +5°C to 100°C, resolution 0.1°C
Temperature uniformity:	±0.2ºC
Temperature accuracy:	±0.1ºC
Timer:	0 - 19h 59min or continuous
Block material:	Anodized aluminum
Block capacity:	12 x 1.5ml tubes
Dimensions (WxDxH):	140 x 120 x 60mm
Weight:	1.3kg
Supply requirements:	230V 50/60Hz, or 120V 50/60Hz

Type	PK	Cat. No.
AccuBlock™ Mini	1	**9.945 780**

2 Microtube block thermostat DB-4S for strips

Grant

Designed for maintaining constant temperature of samples in tube strips. Aluminium dry block offers excellent stability and uniformity, LCD screen for actual and set time and temperatures. Ideal for PCR analysis.
- Dry block holds 32 x 0.2 ml microtubes or 4 x 0.2 ml strips
- Dry temperature control system maintains clean and aerosol-free environment
- 2-line LCD display clearly indicates both set and actual values for temperature and time

2

Specifications

Temperature range:	+25 to 100°C
Stability at 37°C:	±0.03°C
Uniformity at 37°C:	±0.12°C
Heat-up times:	25ºC to 100ºC in 40min 25ºC to 60ºC in 10min 25ºC to 37ºC in 4min
Timer:	1min to 96h
Power supply:	230V, 50/60Hz

Type	Dimensions (W x D x H) mm	PK	Cat. No.
DB-4S	140 x 120 x 70	1	**9.721 059**

E & OE.

1 AccuBlock™ Digital Dry Baths

1

Labnet

The user calibration function allows for easy calibration of in-house standards when required. The dry bath is available as a single or dual block model. Interchangeable blocks are available to accommodate a wide variety of tubes, plates and slides. Each dry bath is supplied with a block lifter that enables the user to exchange blocks easily, even when the block is hot.
- precise microprocessor control
- broad temperature range, to 150°C
- large digital display
- easy user calibration
- single and dual block models

Supplied with user manual, line cord and block lifter. Please order blocks separately

Specifications

Temperature range:	Ambient +5 to +150°C
Temperature uniformity:	±0.2°C
Temperature resolution:	±0.1°C
Temperature accuracy:	±0.3°C
Temperature control:	Microprocessor
Block material:	Stainless steel
Dimensions (WxDxH):	200mm x 265mm x 83mm
Weight:	2.2kg
Supply requirements:	230V 50/60Hz, or 120V 50/60Hz

Type	PK	Cat. No.
AccuBlock Digital Dry Bath, single block	1	**6.224 190**
AccuBlock Digital Dry Bath, dual block	1	**6.225 737**

2 Accessories for Digital Dry Baths AccuBlock™

2

Labnet

Type	PK	Cat. No.
Block, 24 x 1.5ml tubes	1	**6.224 191**
Block, 20 x 2.0ml tubes	1	**6.233 664**
Block, 24 x 0.5ml tubes	1	**6.235 417**
Block, 48 x 0.2ml PCR tubes or 6 x 0.2ml strips	1	**9.945 763**
Block 12 x 15ml centrifuge tubes	1	**9.945 764**
Block 5 x 50ml centrifuge tubes	1	**9.945 765**

3 Block thermostats PCH-1/PCH-2/PCH-3

3

Grant

Personal benchtop cooling/heating dry block for microcentrifuge tubes. The ingenious block construction, combined with the powerful Peltier module, produces very rapid cooling and heating.

Temperature range:	-10 to +100°C
Heat up, amb. to 100°C:	15 min
Cool down, 100°C to amb.:	15 min
Cool down, amb. to -10°C:	21 min

Type	Type	PK	Cat. No.
PCH-1	20 x 0.5ml and 12 x 1.5ml microtubes	1	**9.721 009**
PCH-2	20 x 1.5ml microtubes	1	**9.721 010**
PCH-3	20 x 2.0ml microtubes	1	**9.721 066**

Incubators please see page 815.

1

1 Microtube block thermostat BTD

Grant´s block heating system BTD with fixed block is designed for rapid and precise heating of microtubes up to 100ºC. *Grant*

- Digital temperature control for optimum precision
- Heating block holds combinations of four microtube sizes simultaneously - up to a total of 49 tubes: 24 x 1.5/2.0 ml, 15 x 0.5 ml, 10 x 0.2 ml
- Flexible tube sizes and rapid heat-up time enables swift change of application
- Convenient integral timer for time-sensitive incubations
- Sturdy, durable, easy-to-clean plastic construction; compact design with small footprint
- 2-line display for simple and precise setting of temperature/time and for monitoring current status during operation

Specifications

Temperature range:	+5 to 100°C
Stability at 37°C:	±0.1°C
Uniformity:	±0.1°C
Heat-up times:	25ºC to 100ºC in 15 min
	25ºC to 37ºC in 4 min
Timer:	1 min to 96 h
Power supply:	230V, 50/60Hz

Type	Power W	Dimensions (W x D x H) mm	PK	Cat. No.
BTD	200	210 x 230 x 110	1	**6.223 310**

2

3

2 3 Block thermostats, QBA, QBD and QBH series

For controlled dry heating of test tubes, microplates and Eppendorf tubes in interchangeable aluminium blocks. The following models are available: *Grant*

QBA
- Analogue dial temperature setting
- Two models with 1 or 2 removable/interchangeable blocks
- Robustly constructed in streamlined coolwall aluminium and chemical-resistant plastic

QBD/QBH2
- Choose from three digital systems with 1, 2 or 4 interchangeable blocks (QBD models) and one digital high-temperature system (QBH2) with 2 blocks
- Fast heat-up time and in-block temperature sensing capability using external sensor probe. Please order Cat. No. 6.228 714 separately.
- Built-in timer, programmable delayed start and RS232 output for data monitoring
- **Requires but does not include interchangeable QB-series blocks**

Specifications	**Models QBA1/QBA2**
Temperature range:	+5 to 100°C
Stability at 37°C:	±1.0°C
Uniformity	
within the block at 37°C:	±1.0°C
across similar blocks at 37°C:	±1.0°C
Supply requirements:	230V, 50/60Hz, single phase
	Models QBD1/QBD2/QBD4/QBH2
Temperature range:	+5 to 130°C, QBH2: +5 to 200°C
Stability at 37°C:	±0.1°C
Uniformity	
within the block at 37°C:	±0.1°C
across similar blocks at 37°C:	±0.2°C
Supply requirements:	230V, 50/60Hz, single phase

Type	Blocks accepted	Power W	Length mm	Width mm	Height mm	PK	Cat. No.
QBA1	1	150	230	200	100	1	**9.852 305**
QBA2	2	300	280	200	100	1	**9.852 306**
QBD1	1	150	230	200	100	1	**9.852 307**
QBD2	2	300	280	200	100	1	**9.852 308**
QBD4	4	600	380	200	100	1	**9.852 309**
QBH2	2	300	280	200	100	1	**9.852 310**

Block thermostats, QBA, QBD, QBH series, accessory covers

Not required with QDP-FL mictrotiter blocks *Grant*

Type	Description	PK	Cat. No.
QBL1	Cover for QBA1 and QBD1	1	**9.852 311**
QBL4	Cover for QBD4	1	**9.852 312**
QBL2	Cover for QBA2, QBD2 and QBH2	1	**9.852 314**

E & OE.

1 Digital block thermostats QB, for QBA, QBD, QBH series

NEW!

Accessory blocks for QB series only. Interchangeable.
Machined aluminium, (L x W x H) 140 x 50 x 63mm. Holes drilled as indicated.

Grant

Type	For tubes diam. mm	No.of holes	PK	Cat. No.
QB-10	10 mm	24	1	**9.951 661**
QB-12	12 mm	24	1	**9.951 662**
QB-16	16 mm	12	1	**9.951 663**
QB-18	18 mm	12	1	**9.951 664**
QB-24	24 mm	5	1	**9.951 665**
QB-50	50 ml	4	1	**6.075 814**
QB-H	0.2 ml	56	1	**9.951 666**
QB-E0	0.5 ml	24	1	**9.951 667**
QB-E1	1.5 ml	24	1	**9.951 668**
QB-E2	2.0 ml	24	1	**9.951 669**
QB-E5	5.0 ml	12	1	**6.266 809**

Further blocks available on request.

BlockThermostats TH 21/TK 23

The Block Thermostats are used for tempering of solutions in closed reaction tubes and plates. They stand out due to their high temperature accuracy as well as their various fields of application thanks to over 30 different exchangeable blocks.

Hettich Benelux B.V.

Specifications Thermostats:	**HeatingBlock TH 21 // Heating/CoolingBlock TK 23**
Temperature operation range:	Amb. +3°C to +130°C // Amb. -16°C to +90°C
Temperature adjustable range:	0°C to +137°C // -10°C to +105°C
Accuracy/ resolution:	±0.1°C/0.1°C // ±0.3°C/0.1°C
Max. heating time:	9.5°C/min // 4°C/min
Max. cooling time:	-- // 7°C/min
Dimensions (WxDxH):	220 x 330 x 109mm // 220 x 330 x 144mm
Capacity:	2 exchangeable blocks (not included)
Weight (with block/blocks):	approx. 3.5kg // approx. 7.5kg
Electrical heating/ cooling power:	350W // 130W
Supply requirements:	230V, 50Hz
Easy Control // Smart Control:	Timer 19h 59min // 30 program steps

Description	PK	Cat. No.
HeatingBlockThermostat TH 21	1	**9.777 214**
HeatingBlockThermostat TH 21 CH	1	**9.777 286**
CoolingBlockThermostat TK 23	1	**9.777 212** 2
CoolingBlockThermostat TK 23 CH	1	**9.777 284**

Further power connectors on request.

9.777 212

Suitable exchangeable blocks and accessories - please see page 1306.

4 Block Heaters, analogue and digital, SBH series

Stuart

- choice of either analogue or digital models
- digital models available with either 130°C or 200°C maximum temperature
- three block model for extra capacity
- dual control models have two blocks with independent temperature control
- uniform and stable block temperatures

Designed for the precise heating of test-tubes, microcentrifuge tubes, cuvettes and microplates.
Range compromises an economical analogue model with easy to use, dial setting and advanced digital models with bright, easy to read, LED display which facilitates setting of the required temperature and also accurate monitoring of the actual temperature.
Excellent temperature stability and uniformity is maintained via sensitive, microprocessor control.
Heats to 100°C in <12 mins.
Supplied complete with block extraction tool but without aluminium blocks which must be ordered separately.
With BioCote, silver-based, antimicrobial protection.

1

9.852 300

2

9.852 303

3

6.207 050

4

BioCote

Specifications

Temperature stability at 37°C:	±0.1°C
Uniformity within block at 37°C:	±0.1°C
Uniformity within block at 130°C:	±1°C
Electrical supply:	230V 50Hz
	SBH130 // SBH130D // SBH200D
Number of blocks:	2
Temp. range (Ambient):	Amb.+8°C to +130°C // Amb.+8°C to +130°C // Amb.+8°C to +200°C
Display type:	Calibrated knob // LED // LED
Display resolution:	10°C // 0.1°C // 0.1°C
Dimensions (WxDxH) mm:	235 x 280 x 115mm
Net weight:	2.1kg // 2.3kg // 2.3kg
Heater power:	300W
	SBH130D/3 // SBH200D/3
Number of blocks:	3
Temp. range (Ambient):	Amb.+8°C to +130°C // Amb.+8°C to +200°C
Display type:	LED
Display resolution:	0.1°C
Dimensions (WxDxH) mm:	310 x 280 x 115mm
Net weight:	3.2kg
Heater power:	450W
	SBH130DC // SBH200DC
Number of blocks:	2 (independent control)
Temp. range (Ambient):	Amb.+8°C to +130°C // +50°C to +200°C
Display type:	LED
Display resolution:	0.1°C
Dimensions (WxDxH) mm:	310 x 280 x 115mm
Net weight:	2.9kg
Heater power:	300W

Type	Description	PK	Cat. No.	
SBH130	Block heater, 2 block, analogue, 130°C	1	**9.852 300**	1
SBH130D	Block heater, 2 block, digital, 130°C	1	**9.852 301**	
SBH200D	Block heater, 2 block, digital, 200°C	1	**9.852 302**	
SBH130D/3	Block heater, 3 block, digital, 130°C	1	**7.624 685**	
SBH200D/3	Block heater, 3 block, digital, 200°C	1	**9.852 303**	2
SBH130DC	Block heater, 2 block, digital, dual control, 130°C	1	**6.207 050**	3
SBH200DC	Block heater, 2 block, digital, dual control, 200°C	1	**9.852 315**	

Aluminium blocks SHT for block heaters Stuart SBH series

Stuart

Description	PK	Cat. No.
Aluminium block for 20 x 10.5mm Ø tubes	1	**9.951 617**
Aluminium block for 20 x 12.5 mm Ø tubes	1	**9.951 618**
Aluminium block for 12 x 16.5 mm Ø tubes	1	**9.951 619**
Aluminium block for 8 x 19.5 mm Ø tubes	1	**9.951 620**
Aluminium block, solid, for user to drill as required	1	**9.951 621**
Aluminium block for 48 x 0.2 ml centrifuge tubes	1	**9.951 622**
Aluminium block for 20 x 1.5 ml Eppendorf Tubes®	1	**9.951 623**
Aluminium block for 20 x 2.0 ml Eppendorf Tubes®	1	**9.951 624**
Aluminium block for 15 x 10 mm cuvettes.	1	**9.951 625**

*Separations can be removed to take larger cells

E & OE.

Dry Block Heater

IKA

Digital block heaters for 1, 2, 3 or 4 aluminium blocks provides precise temperature control in small vessels. Included PT 1000 temperature sensor allows temperature control directly in the sample vessel. It is used with PCR tubes, PCR strips, Greiner tubes, microplates and cuvettes. The block heater is ideal for melting and boiling point determination, enzyme reactions, incubation and activation of cultures, immunoassays, DNA denaturation, culture media tests, coagulation tests, blood-urea-nitrogen determinations and in situ hybridizations.

- Stepless adjustable temperature up to 120°C
- Timer: Countdown, adjustable from 1min to 99h 59min
- Counter: Display of heating time
- Highly versatile with a large number of blocks
- Error code display
- Fixed safety circuit
- Acoustic signal at end of test

Without blocks. Please order separately.

Specifications

Temperature range	RT to +120°C
Display:	LED
Heat control accuracy:	±1K
Connection for ext. temperature sensor:	DIN 12878
Control accuracy with sensor:	±1K
Temperature constancy in medium:	±1K
Temperature stability within the blocks at 37°C:	±0.2°C
Temperature stability within the blocks at 60°C	±0.4°C
Fixed safety circuit:	+150°C
Protection class acc. to DIN EN 60529:	IP 21
Power supply:	220-240V, 50760Hz

Type	Heating power W	Dimensions Set-up plate (W x D) mm	Dimensions (W x D x H) mm	PK	Cat. No.
Dry Block Heater 1	165	95 x 76	151 x 228 x 73	1	**9.816 801** 1
Dry Block Heater 1 UK	165	95 x 76	151 x 228 x 73	1	**9.816 802**
Dry Block Heater 1 CH	165	95 x 76	151 x 228 x 73	1	**9.816 803**
Dry Block Heater 2	250	95 x 152	151 x 304 x 73	1	**9.816 804**
Dry Block Heater 2 UK	250	95 x 152	151 x 304 x 73	1	**9.816 805**
Dry Block Heater 2 CH	250	95 x 152	151 x 304 x 73	1	**9.816 806**
Dry Block Heater 3	330	95 x 228	151 x 380 x 73	1	**9.816 807** 2
Dry Block Heater 3 UK	330	95 x 228	151 x 380 x 73	1	**9.816 808**
Dry Block Heater 3 CH	330	95 x 228	151 x 380 x 73	1	**9.816 809**
Dry Block Heater 4	412	95 x 304	151 x 456 x 73	1	**9.816 810**
Dry Block Heater 4 UK	412	95 x 304	151 x 456 x 73	1	**9.816 811**
Dry Block Heater 4 CH	412	95 x 304	151 x 456 x 73	1	**9.816 812**

1

9.816 801

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9.816 807

Aluminium blocks for Dry Block Heater

NEW!

IKA

Type	Description	PK	Cat. No.
DB 1.1	Single block for PCR tubes (0.5ml), holes (diam. x D): 7.9 x 27.6mm	1	**9.816 813**
DB 1.2	Single block for Eppendorf® microtubes (1.5ml), holes (diam. x D): 11.5 x 36.9mm	1	**9.816 814**
DB 3.1	Single block for centrifuge tube combination 0.5ml, 15ml, 50ml	1	**9.816 815**
DB 3.2	Single block for microtube combination 1.5ml, 15ml, 50ml	1	**9.816 816**
DB 6.3	Double block for 1 x 96 well plates (0.2ml), holes (diam. x D): 6.4 x 15.5mm	1	**9.816 817**
DB 7.1	Double block for 96 or 384 wellplates, depth: 13.5mm	1	**9.816 818**

Further blocks available on request.

1

1 Heating block Eppendorf ThermoStat C

NEW!

Eppendorf

The ideal device to accurately set and maintain temperatures. Precise temperature control is achieved using optimally balanced heating and cooling elements (peltier technology). The temperature keys provide quick access to five important experimental temperatures (4°C, 16°C, 37°C, 56°C and 95°C). You can also individually store 15 programs.

- Excellent temperature accuracy
- Precise temperature control from -10 to +110°C (+110°C can be set when using 12mm and cryo SmartBlocks™)
- Prevent condensation and improve temperature homogeneity with the new ThermoTop
- Comprehensive range of program functions

Specifications

Temperature operation range:	min: +3°C below RT, max: +100°C
Temperature adjustable range:	+10 to +110°C (+110°C can be set when using 12mm and cryo SmartBlocks™)
Accuracy/ resolution:	±0.5°C at +20 to +45°C
Max. heating time:	5.5°C/min
Max. cooling time:	5°C/min between +110°C and RT
Dimensions (WxDxH):	206 x 304 x 131mm
Capacity:	dependent on Eppendorf SmartBlock™
Weight:	4.3kg
Power consumption:	200W (max.)
Power supply:	220 - 240V ±10%, 50/60Hz

Type	Description	PK	Cat. No.
Eppendorf ThermoStat C		1	**9.776 903**

Thermo Shakers

Hettich Benelux B.V.

The Thermo Shakers are used for tempering and mixing of solutions in closed reaction tubes and plates. They possess a very large temperature application range as well as manifold programming options.

2

9.777 202

CoolingThermomixer MKR 13/MKR 23

For cooling, heating and mixing of samples. *Hettich Benelux B.V.*

Specifications	**MKR 13 // MKR 23**
Temperature operation range:	Amb. -16°C to +100°C // Amb. -11°C to +70°C
Temperature adjustable range:	-10°C to +105°C // 0°C to +80°C
Accuracy/resolution:	±0.1°C/0.1°C // ±0.3°C/0.1°C
Max. heating time:	6°C/min // 3.5°C/min
Max. cooling time:	12°C/min // 6.5°C/min
Shaking frequency:	200 to 1500rpm // 200 to 1200rpm
Orbit:	3mm orbital
Dimensions (WxDxH):	220 x 330 x 144mm
Capacity:	1 exchangeable block // 2 exchangeable blocks (not included)
Weight (with block/blocks):	9kg // approx. 9.5kg
Electrical heating/cooling power:	130W // 200W
Supply requirements:	230V, 50Hz
Smart Control:	30 program steps, short mix, interval shaking

Description	PK	Cat. No.
CoolingThermoMixer MKR 13	1	**9.777 200**
CoolingThermoMixer MKR 13 CH	1	**9.777 272**
CoolingThermomixer MKR 23	1	**9.777 202** 2
CoolingThermomixer MKR 23 CH	1	**9.777 274**

Further power connectors on request.

Exchangeable blocks - please see page 1307.

E & OE.

HeatingThermoMixer MHR 11/MHR 13

Extremely short heating rate.
Highest accuracy: max. 0.1°C deviation.

Hettich Benelux B.V.

Specifications:

Temperature operation range:	Amb. +3°C to +130°C
Temperature adjustable range:	0°C to +137°C
Accuracy/ resolution:	±0.1°C/0.1°C
Max. heating time:	11.5°C/min
Shaking frequency MHR 11:	80rpm to 1500rpm
Shaking frequency MHR 13:	200rpm to 1500rpm
Orbit:	3mm orbital
Dimensions (WxDxH):	220 x 330 x 109mm
Capacity:	1 exchangeable block (not included)
Weight:	6.5kg
Electrical heating power:	200W
Supply requirements:	230V, 50Hz
Easy Control MHR 11:	Timer 19h 59min, slider for shaking frequency
Smart Control MHR 13:	30 program steps, short mix, interval shaking

Description	PK	Cat. No.
HeatingThermomixer MHR 11	1	**9.777 208**
HeatingThermomixer MHR 11 CH	1	**9.777 280**
HeatingThermomixer MHR 13	1	**9.777 204** 1
HeatingThermomixer MHR 13 CH	1	**9.777 276**

Further power connectors on request.

HeatingThermoMixer MHR 23/MHL 23

Our bestseller: universally applicable
Double capacity.

Hettich Benelux B.V.

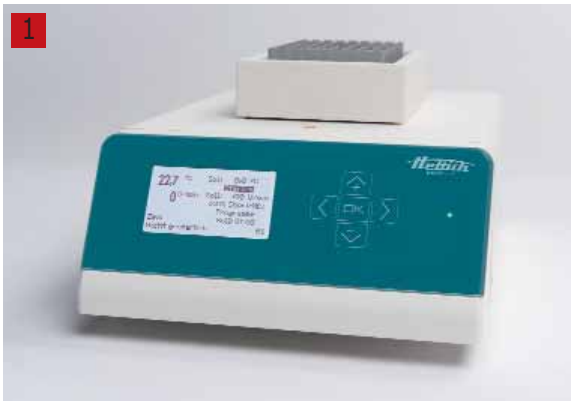
Specifications:

Temperature operation range:	Amb. +3°C to +130°C
Temperature adjustable range:	0°C to +137°C
Accuracy/ resolution:	±0.1°C/0.1°C
Max. heating time:	9.5°C/min
Shaking frequency MHR 23:	200rpm to 1500rpm
Shaking frequency MHL 23:	200rpm to 1300rpm
Orbit MHR 23:	3mm orbital
Orbit MHL 23:	3mm linear
Dimensions (WxDxH):	220 x 330 x 109mm
Capacity:	2 exchangeable blocks (not included)
Weight:	7.0kg
Electrical heating power:	350W
Supply requirements:	230V, 50Hz
Smart Control:	30 program steps, short mix, interval shaking

Description	PK	Cat. No.
HeatingThermomixer MHR 23, orbital movement	1	**9.777 206** 2
HeatingThermomixer MHR 23 CH, orbital movement	1	**9.777 278**
HeatingThermomixer MHL 23, linear movement	1	**9.777 210**
HeatingThermomixer MHL 23 CH, linear movement	1	**9.777 282**

Further power connectors on request.

1



9.777 204

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9.777 206

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9.777 121

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9.777 127

Exchangeable blocks for Thermomixers and BlockThermostats

NEW!

Hettich Benelux B.V.

The right physical weight and fitting is important for high temperature accuracy inside the sample. All blocks are made out of temperature conductible aluminium. Customized blocks on request. All blocks are autoclavable.

Type	For	PK	Cat. No.	
BM 02	micro tubes, 96 x 0.2ml, conical and 8 tube strips	1	**9.777 120**	
BM 05	micro tubes, 38 x 0.5ml, conical	1	**9.777 121**	1
BM 15	micro tubes, 24 x 1.5ml, conical	1	**9.777 122**	
BM 20	micro tubes, 24 x 2.0ml, cylindrical	1	**9.777 123**	
BP 12	test tubes, 24 x Ø 12mm, flat bottom, drill depth 20mm	1	**9.777 125**	
BP 16	test tubes, 24 x Ø 16.5mm, round bottom, drill depth 51mm, with insulating cover	1	**9.777 127**	2
BZ 15	"Falcon"-tubes, 14 x 15ml, with insulating lid, drill depth 51mm	1	**9.777 128**	
BZ 50	"Falcon"-tubes, 6 x 50ml, with insulating lid, drill depth 51mm	1	**9.777 129**	
BC 96	PCR plates, 96 well, V bottom	1	**9.777 130**	
BV 96	microtiter plates, 96 well, round or V bottom	1	**9.777 132**	
BF 96	microtiter plates, 96 well, flat bottom	1	**9.777 133**	
BD 96	deep well plates, 96 well, round bottom	1	**9.777 134**	
BM 13	cryo vials, 1.5-2.0ml	1	**9.777 149**	

3 Eppendorf ThermoMixer™ F1.5/Eppendorf ThermoMixer™ FP

NEW!

Eppendorf

To simplify your lab routines. Whether you regularly work with 1.5 mL reaction vessels or microplates (MTP and DWP), our customized systems offer you the perfect solution for your special applications. From 4°C above RT to 100°C, there are no limits to the application possibilities. The ThermoMixer F1.5 is equipped with block for 1.5 mL reaction vessels and the ThermoMixer FP has a block for microplates

- Efficient mixing thanks to 2DMix-Control and anti-spill technology
- Simple and intuitive operation using predefined temperature keys (37°C, 42°C, 56°C and 95°C)
- Improved temperature homogeneity with the new ThermoTop

Specifications

Temperature operation range:	min: +4°C above RT, max: +100°C
Temperature adjustable range:	+1°C/+100°C
Accuracy/Resolution ThermoMixer™ F1.5:	±0.5°C at +20 to +45°C
Accuracy/Resolution ThermoMixer™ FP:	±1.0°C at +20 to +45°C
Max. heating time ThermoMixer™ F1.5:	11°C/min
Max. heating time ThermoMixer™ FP:	18°C/min
Shaking frequency ThermoMixer™ F1.5:	300 to 1500rpm
Shaking frequency ThermoMixer™ FP:	300 to 2000rpm
Orbit:	3mm orbital
Dimensions (WxDxH):	206 x 304 x 131mm
Capacity ThermoMixer™ F1.5:	24 tubes 1.5 ml
Capacity ThermoMixer™ FP:	Microplates/Deepwell plates
Weight ThermoMixer™ F1.5:	6.0kg
Weight ThermoMixer™ FP:	5.8kg
Electrical heating power:	200W (max.)
Power supply:	220 - 240V ±10%, 50/60Hz

Type	PK	Cat. No.
ThermoMixer™ F1.5	1	**9.776 904**
ThermoMixer™ FP	1	**9.776 905**

3

E & OE.

1 Eppendorf ThermoMixer C

NEW!

Eppendorf

The Eppendorf ThermoMixer C combines unique mixing performance with excellent temperature control to consistently guarantee complete, dependable and reproducible test results. Improve your assay results by mixing and incubating samples at the same time.

- Excellent mixing performance due to unique 2DMix-Control technology
- Prevent condensation and improve temperature homogeneity with the new ThermoTop
- Ergonomic design
- Eppendorf QuickRelease™ Technology for fast and simple block exchange of Eppendorf SmartBlocks™
- Highest flexibility thanks to broad choice of exchangeable SmartBlocks™
- Heating, mixing and cooling of all common tubes and microplates with a volume range of 5µl to 50ml

Now you can control the temperature of your samples with ease: The ThermoTop, with unique condensation protection technology, reliably prevents condensation formation on the tube lid and wall. It also improves temperature homogeneity. The Eppendorf ThermoTop does not have a cable connection. It is detected by the device as soon as it is positioned, via inductive signal transmission, and thermo-regulation starts automatically. The sample temperature is not affected: optimal sample protection with optimal reaction conditions produce optimal results.

Specifications

Temperature operation range:	min: 15°C below RT, max: +100°C
Temperature adjustable range:	+1 to +100°C
Accuracy/Resolution:	±0.5°C at +20 to +45°C
Max. heating time:	6°C/min
Max. cooling time:	2.5°C/min between +100°C and RT
Shaking frequency:	300 to 3000rpm
Orbit:	3mm
Dimensions (WxDxH):	206 x 304 x 131mm
Capacity:	dependent on Eppendorf SmartBlock™
Weight:	6.2kg
Electrical heating power:	200W (max.)
Power supply:	220 - 240V ±10%, 50/60Hz

Type	PK	Cat. No.
Eppendorf ThermoMixer™ C	1	**9.776 902**

2 Exchangeable blocks Eppendorf SmartBlocks™ for Eppendorf ThemoMixer™ C and ThermoStat C

NEW!

Eppendorf

Flexibility has never been this easy. Eppendorf offers a variety of SmartBlocks for tubes from 5ml to 50ml.

- Fast and simple block exchange due to Eppendorf QuickRelease
- Optimized block design guarantees maximum temperature transfer to the sample

Type	Description	PK	Cat. No.
Eppendorf SmartBlock™ 0.5 mL	24 tubes, 0.5ml	1	**9.776 906**
Eppendorf SmartBlock™ 1.5 mL	24 tubes, 1.5ml	1	**9.776 907**
Eppendorf SmartBlock™ 2.0 mL	24 tubes, 2.0ml	1	**9.776 908**
Eppendorf SmartBlock™ 5.0 mL	8 Eppendorf Tubes®, 5.0ml	1	**9.776 909**
Eppendorf SmartBlock™ 15 mL	8 conical tubes, 15ml	1	**9.776 910**
Eppendorf SmartBlock™ 50 mL	4 conical tubes, 50ml	1	**9.776 911**
Eppendorf SmartBlock™ 12 mm	24 tubes, diam. 11 to 11.9mm	1	**9.776 912**
Eppendorf SmartBlock™ cryo	24 cryogenic tubes, 1.5 to 2.0ml, all bottom forms	1	**9.776 913**
Eppendorf SmartBlock™ plates	For micro plates and Deepwell plates, incl. lid	1	**9.776 914**
Eppendorf SmartBlock™ PCR 96	PCR plates 96, incl. lid	1	**9.776 915**
Eppendorf SmartBlock™ PCR 384	PCR plates 384, incl. lid	1	**9.776 916**

3 Accessories for Eppendorf Thermomixer ™

NEW!

Eppendorf

Eppendorf ThermoTop® with condens.protect® technology avoids condensation and improves temperature uniformity.
Lid for Eppendorf Thermomixer ™ F1.5 and FP, for Eppendorf Smart Blocks ™ 0.5-2.0 mL, plates, PCR 96 and PCR 384

Type	PK	Cat. No.
Eppendorf ThermoTop®	1	**9.776 918**
Lid	1	**9.776 917**

1

1 Thermoshaker PCMT for microtubes and PCR plates

Grant

Variable speed, variable temperature heating and cooling thermoshaker with a choice of blocks for microtubes and microplates. The PMCT can cool down to 15°C below ambient temperature.
- Fast heat-up and cooling times
- Temperature setting range +4°C to +100°C
- Temperature control range 15°C below ambient to +100°C
- Shaking speed: 250 to 1400 rpm
- Temperature uniformity at 37°C: ±0.1°C

Choice of 5 interchangable blocks:
- HC18 20 (20 x 0.5ml and 12 x 1.5ml microtubes)
- HC32 (20 x 0.2ml and 12 x 1.5ml microtubes)
- HC24 (24 x 2ml microtubes)
- HC96 (96-well microplate for PCR, 0.2ml)

Block is required and not included in delivery. Please order separately.

Applications:
- Genetic analyses, extraction of DNA, RNA and further sample preparation
- Biochemical studies of enzymatic reactions and processes
- Extraction of metabolites from cellular material

Type	PK	Cat. No.
PCMT	1	**9.721 050**

2

9.721 052

Accessory blocks for Thermoshaker PCMT

Grant

Type	PK	Cat. No.
Block HC24N for 24 x 1.5ml microtubes	1	**9.721 073**
Block HC18 for 20 x 0.5 + 12 x 1.5ml microtubes	1	**9.721 052** 2
Block HC24 for 24 x 2.0ml microtubes	1	**9.721 053**
Block HC32 for 20 x 0.2 + 12 x 1.5ml microtubes	1	**9.721 054**
Block HC96 for 96-well microplates (0.2ml)	1	**9.721 055**

3

6.234 725

Microtube thermoshaker PHMT

Grant

The PHMT is a compact and versatile thermoshaker, ideal for applications requiring heating and shaking in microtubes and suitable for use in cold rooms and incubators (operating temperature range 4 to 40°C). It is effectively three instruments in one: a microtube thermoshaker, a compact benchtop incubator without shaking, a microtube shaker without temperature control. By combining the mixing operation with the incubation phase, reaction process times and operator workload are reduced and efficiency of many procedures is increased, resulting in a higher throughput.
- temperature range: ambient +5 to 100°C
- uniformity at 37°C: ±0.1°C
- shaking speed: 250rpm to 1400rpm
- timed shaking operation: 1 min to 96 hours
- rapid heat-up
- continuous or timed operation, with alarm buzzer and automatic switch-off facility
- incl. interchangeable block

4

9.721 079

Type	For	PK	Cat. No.
PHMT-PSC18	20 x 0.5 ml + 12 x 1.5 ml	1	**6.234 725** 3
PHMT-PSC32	20 x 0.2 ml + 12 x 1.5 ml	1	**9.721 079** 4
PHMT-PSC24	24 x 2.0 ml	1	**9.721 041**
PHMT-PSC24N	24 x 1.5 ml	1	**9.721 072**
PHMT-PSC96	1 x 96 well	1	**9.721 080**

E & OE.

1 Accessory blocks for Microtube thermoshaker PHMT

Grant

Type	PK	Cat. No.
Block PSC18 for 20 x 0.5 + 12 x 1.5 microtubes	1	**9.721 036**
Block PSC24 for 24 x 2.0ml microtubes	1	**9.721 042**
Block PSC24N for 24 x 1.5ml microtubes	1	**9.721 071**
Block PSC32 for 20 x 0.2 + 12 x 1.5ml microtubes	1	**9.721 043**
Block PSC96 for 96-well plates (0.2ml)	1	**9.721 044**

1

Thermo shaker AccuTherm

NEW!

Labnet

The AccuTherm is a temperature controlled mixer that uses peltier technology to rapidly heat and cool precious samples. The combination of heating/cooling with mixing makes the AccuTherm ideal for many life science research applications in the fields of molecular biology, biochemistry and clinical chemistry. It's compact footprint incorporates an intuitive control panel with a large multicolor display, which allows users to easily program and view temperature, time and speed settings. Eight interchangeable aluminum blocks accommodate PCR plates and tubes ranging in size from 0.2ml to 15ml.

Specifications

Temperature operation range:	Amb. -14°C to +100°C
Temperature adjustable range:	0°C to +105°C
Accuracy/resolution:	±0.5°C/0.5°C
Max. heating time:	6.5°C/min
Max. cooling time:	1.5°C/min
Shaking frequency:	300 to 1500rpm
Orbit:	3mm
Dimensions (WxDxH):	330 x 166 x 240mm
Capacity:	1 exchangeable block*
Weight:	8.5kg
Electrical heating/cooling power:	150W
Supply requirements:	230V, 50/60Hz

Description	PK	Cat. No.
Shaking incubator AccuTherm	1	**6.261 411** 2
Block A for 40 x 1.5ml reaction tubes	1	**6.261 695**
Block B for 54 x 0.5ml reaction tubes	1	**6.261 696**
Block C for 96 x 0.2ml reaction tubes	1	**6.261 697** 3
Block D for 24 x 15ml reaction tubes	1	**6.261 698**
Block E, water bath (115 x 73 x 38mm)	1	**6.261 699**
Block G for 26 x 0.5ml and 24 x 1.5ml reaction tubes	1	**6.261 706**
Block H for 40 x 2.0ml reaction tubes	1	**6.261 707**
Block J for 96 well Elisa plates	1	**6.261 708** 4

*Exchangeable blocks are not included in delivery.

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6.261 411

3

6.261 697

4

6.261 708

1 Shaking Incubators VorTemp™ 56/ 1550

Labnet

VorTemp 56 is supplied with interchangeable platforms for microtubes (56 x 1.5ml tubes, or small tubes with adapters) or microplates (accepts standard and deepwell plates, up to 2.0ml). VorTemp 1550 includes platforms for 8 x 50ml and 18 x 15ml tubes.
The shaker in the VorTemp 56 may be turned off, allowing the unit to be used as a static incubator.
- shake and incubate samples simultaneously
- interchangeable platforms
- broad temperature and speed range
- intelligent control with digital LED display

1

Specifications

Temperature range	Ambient + 5°C to 99°C
Temperature accuracy	±0.5°C
Speed range:	
Vortemp 56	200 to 1200rpm
VorTemp 1550	200 to 900rpm
Motion/orbit	Circular/3mm
Timer	1 to 99 minutes or continuous
Capacity:	
Vortemp 56	56 x 1.5/2.0ml tubes, 4 standard or 2 deep well microplates
VorTemp 1550	18 x 15ml, 8 x 50ml tubes
Dimensions (WxDxH):	
VorTemp 56	23 x 31 x 23cm
VorTemp 1550	26 x 31 x 31cm
Weight:	
VorTemp 56	11kg
VorTemp 1550	12kg
Electrical	230V 50Hz or 120V 60Hz

Description	PK	Cat. No.
VorTemp 56	1	**9.945 760**
VorTemp 1550	1	**9.945 761**
Additional platform for microtubes	1	**9.945 762**

E & OE.

Shakers, Disruptor Genie® analog/digital

Scientific Industries

For cell disruption and homogenisation. The patented Disruptor Genie® provides a multi-directional action, which simultaneously agitates and vortexes at high speed, dramatically increasing cell disruption or sample resuspension efficiency.

- Digital model for accurate, repeatable and reproducible results
- Dramatically increased sample disruption efficiency. Ideal for difficult glass bead procedures (Glass beads - please order separately), cell disruption/homogenisation of yeast, bacteria, plant and animal tissues and pellet resuspensions or anything that requires extremely violent, high-speed agitation.
- Patented multi-directional action simultaneously agitates and vortexes at high-speed producing greater yields in less time
- Hands-Free disruption of up to twelve 1.5ml or 2.0ml microtubes with timer from 0 to 15 minutes (Disruptor Genie® analog), 0 to 99 minutes (Disruptor Genie® digital) or continuous operation
- Performance comparable to expensive ultrasonic cell disruptors/homogenisers.
- Suitable for use in cold rooms or incubators
- Remove the microtube holder and attach the supplied pop-off cup for high-speed vortexing of single test tubes

Supplied with: Disruptor Genie + Tube holder for 12 tubes

Specifications

Speed	
Disruptor Genie® analog:	2850rpm
Disruptor Genie® digital:	1000 to 2850rpm
Dimensions (WxDxH):	122 x 165 x 190mm
Weight:	4.3kg
Supply requirements:	220V 50Hz, 250mA

Type	Connector	PK	Cat. No.	
Disruptor Genie® analog	EU	1	**9.730 115**	1
Disruptor Genie® analog	UK	1	**9.730 116**	
Disruptor Genie® analog	CH	1	**9.730 117**	
Disruptor Genie® digital	EU	1	**6.253 276**	2
Disruptor Genie® digital	UK	1	**9.730 118**	
Disruptor Genie® digital	CH	1	**9.730 119**	

1

9.730 115

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6.253 276

Accessories for Disruptor Genie®

Description	PK	Cat. No.	
Microtube Holder for 12 x 1.5 or 2.0ml tubes	1	**6.253 281**	3
0.1mm Disruptor Beads, 375g	1	**9.730 100**	
0.5mm Disruptor Beads, 375g	1	**9.730 101**	

3

6.253 281

Tubes please see page 1279.

Cell disruption please see page 1262.

1

1 Homogeniser, POLYTRON® PT 1200 E

KINEMATICA GmbH

This handheld homogeniser is ideal for quick processing of small sample quantities and volumes, for example in Life science or genetic.

Application volume: 0.05 to 250ml
- Soft start prevents splashing of homogenate from sample vessel
- Tip speed up to 12 m/s
- Ergonomic design and various models of dispersing aggregates in Easy-to-Clean design

Applications:
- General homogenisation applications (dispersion and emulsification)
- Sample preparation for subsequent extraction of pharmaceutical agents (API)
- Cell disruption, RNA/DNA isolation from tissue
- Dispersion of small quantities from plants, animals or human tissue

Please order tools separately.

Specifications

Application volume:	0.05 to 250ml
Motor input power:	100W
Aggregates:	dia. 3, 5, 7 and 12mm and dia. 20mm X EC-E116 Aggregat
Speed range:	Stepless up to 25.000min^{-1}
Max. viscosity:	6000mPas
Drive Dimensions (L x W x H):	220 x 44 x 55 mm
Weight drive:	440g
Tested to:	EN/IEC 61010, 61326-1

Type	PK	Cat. No.
PT 1200 E, 230V (with EU-plug)	1	**9.571 492**

2

2 Homogeniser, POLYTRON® PT 2500 E

NEW!

KINEMATICA GmbH

The PT2500 E is the ideal solution for cost-conscious laboratories. It is able to perform a lot of applications.

- Application volume 0.05 to 2500ml
- Soft start prevents splashing of homogenate from sample vessel
- Tip speed up to 32 m/s
- Speed remains constant even when viscosity changes
- Various models of dispersing aggregates in Easy-to-Clean design

Applications:
- General homogenisation applications (dispersion and emulsification)
- Formulation of lotions, creams and food
- Production of oil-water emulsions

Please order tools separately.

Specifications

Application volume:	0.05 to 2500ml
Motor input power:	500W
Aggregates:	dia. 3, 5, 7 and 12mm and dia. 20mm and 25mm
Speed range:	Stepless 500 to 30.000min^{-1}
Max. viscosity:	6000mPas
Drive Dimensions (L x W x H):	157 x 76 x 236mm
Tested to:	IEC/EN61326-1/IEC/EN 61000-6-2/EN 61000-6-4 IEC/EN 61010-2-51

Type	PK	Cat. No.
POLYTRON® PT 2500 E	1	**4.013 108**

Suitable tools please see page 549.

E & OE.

1 2 Spectrophotometer Genova Plus, for Life Science

Jenway

The Genova Plus is a UV/visible spectrophotometer dedicated to life science analysis. This spectrophotometer allows the measurement of DNA concentration dsDNA, ssDNA, RNA, Oligonucleotides, 260/ 280, 260/ 230, Variable ratio., with an optional correction at 320nm.The Genova Plus is pre-programmed with Bradford, Lowry, Biuret, BCA and Direct UV methods for protein analysis. The Genova Plus has an OD measurement mode enabling users to measure optical density at 600nm for cell harvesting. The purity scan across the entire wavelength range from 198nm to 1000nm displays any distorted peaks enabling impurities to be easily identified. With the touch of a button the Genova plus can be converted to a standard spectrophotometer for basic scanning, quantification, kinetics and multi-wavelength operations. 2 in 1 Spectrophotometer.

- Improved navigation system for easy and intuitive usability
- Improved optics
- Pre-programmed for DNA/RNA analysis
- DNA purity scan across entire wavelength range
- Protein methods pre-loaded
- Standard spectrophotometer functions
- Press to read xenon lamp
- Icon driven software
- Small footprint
- Save methods and results to USB memory stick
- 3 year warranty including xenon lamp

Supplied with: Single micro-cuvette holder, 4GB USB memory stick, instruction manual and universal power supply.

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Specifications

Wavelength	
Range:	198 to 1000nm
Wavelength repeatability:	±0.5nm
Resolution:	1nm
Accuracy:	±2nm
Spectral bandwidth:	5nm
Scan interval:	1, 2 and 5nm
Photometrics	
Absorbance Range:	-0.300 to 2.500A
Transmittance Range:	0 to 199.9%T
Photometric Accuracy:	±1%T, ±0.01A at 1.000 Absorbance
Concentration/Quantitation	
Range:	0 to 9999
Resolution:	Selectable 1/0.1/0.01/0.001
Outputs:	USB, Analogue, RS-232, internal printer (optional)
Dimensions (WxDxH):	275mm x 400mm x 220mm
Weight:	6kg

Type	PK	Cat. No.
Life Science Analyser Genova Plus	1	**9.775 160**

Accessories for Spectrophotometer Genova Plus

NEW!

Jenway

Description	PK	Cat. No.
Internal printer	1	**9.775 434**
TrayCell for ultra-micro sample volumes	1	**9.775 438**
Micro-cuvette holder with reduced aperture	1	**9.775 437**
10x10mm path length cuvette holder	1	**9.775 161** 3
10x100mm path length cuvette holder	1	**9.775 430** 4
16/24mm test tube holder	1	**9.775 436**
Water heated 10x10mm path length cuvette holder	1	**9.775 162**
8 cell automatic turret	1	**6.254 445** 5
Sipper pump	1	**9.775 163**
Peltier pump	1	**6.254 430**
Combined Sipper/Peltier	1	**9.775 164** 6
Dust cover	1	**9.775 165**
4GB USB memory stick	1	**9.775 166**
Paper roll for printer	1	**9.775 167**

3

9.775 161

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9.775 430

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6254 445

6

9.775 164

Further spectrophotometer please see page 1041.

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2

1 2 Spectrophotometer Genova Nano

Jenway

The Genova Nano micro-volume spectrophotometer measures small sample volumes as low as 0.5µl with a high degree of accuracy, reproducibility and speed. It has the ability to measure small sample volumes, conserves precious samples, reduces the need for dilutions and eliminates the requirement for cuvettes. Cleaning is quick and simple; wiping the read heads with a microfiber cloth removes all trace of the sample, allowing faster change over between samples and therefore increasing sample throughput.

3 in 1 Spectrophotometer
Standard Spectrophotometer with all the functions of the 7315. With measurement modes for photometrics, concentration, multi-wavelength, spectrum scanning, quantitation and kinetics.
Life Science Spectrophotometer with all the functions of the Genova plus. Additional measurement modes for the measurement of nucleic acid purity, protein assays, nucleic acid concentration and optical density of cell cultures add to the flexibility of the Genova Nano.
Micro-volume Spectrophotometer: Making measurements easier, quicker and less strenuous for 0.2 to 0.5 µl samples.

- Micro-volume, life science and standard spectrophotometer in one
- Ideal for DNA, RNA and Protein measurements
- Only 0.5µl sample volume required
- Purity scan over entire wavelength range, 198 to 1000nm
- Detects DNA concentrations as low as 2ng/µl
- Easy and quick to clean
- Results are reproducible, accurate and easily obtained
- Method and result saving to USB memory stick
- 3 year warranty including Xenon lamp

Specifications

Wavelength	
Range:	198 to 1000nm
Accuracy:	±2nm
Spectral Bandwidth:	5nm
Path Length:	0.2 or 0.5mm (auto-ranging)
Photometrics	
Absorbance Range:	15 to 125A (10mm equivalent)
Absorbance Accuracy:	±2% at 260nm
Absorbance Precision:	<0.005A between 0 and 1A (at 260nm and 0.5mm)
Concentration/Quantitation	
Maximum Concentration:	6000ng/µl (dsDNA) (at 0.2mm)
Detection Limit:	2ng/µl (dsDNA) (at 0.5mm)
Measurement Time:	<6.5 seconds
Minimum Sample Size:	0.5µl (at 0.2mm) 1.0µl (at 0.5mm)
Maximum Sample Size:	5µl (in Nano mode)
DNA measurement modes:	dsDNA, ssDNA, RNA, Oligonucleotides, 260/280, 260/230, Variable ratio
Protein measurement modes:	BCA, Bradford, Lowry, Biuret, Direct UV
Dimensions (WxDxH):	275 x 400 x 220mm
Weight:	7.7kg

Type	PK	Cat. No.
Genova Nano	1	**9.775 171**

3

3 Micro Volume Analysis TrayCell

Hellma Analytics

Fibre-Optic Micro Measuring Cell. Accessory for standard spectrophotometer for droplet analysis.
Sample volume 0.7µl to 10µl.

Typical applications are:
- nucleic acid analysis.
- determination of the incorporation frequency of fluorescent dye labels (FOI).
- protein analysis (A280, BCA, Lowry etc.).
- all UV/Vis analysis utilising wavelength range 190nm to 1100nm.
- material: SUPRASIL® quartz.

Please state the required cell centre height (8.5mm, 15mm or 20mm) when placing your order! TrayCell is supplied as standard with caps for both 0.2mm and 1mm light path. Additional light path of 0.1mm and 2mm are available.

Path length	Capacity	Height	Centre height	PK	Cat. No.
mm	µl	mm	mm		
0,2 / 1	0,5 to 10	68.5 / 75 / 80	8.5 / 15 / 20	1	**6.224 913**
0,2 / 1	0,5 to 10	53 / 59.5 / 64.5	8.5 / 15 / 20	1	**6.230 433**

E & OE.

Densitometer DEN-1/DEN-1B

1

Compact and efficient benchtop densitometers for measuring turbidity of cell suspensions in a variety of life science applications. The densitometers are designed and factory calibrated to measure turbidity in the range of 0.3 to 5.0 McFarland units (DEN-1) 0.00 to 6.00 McFarland units (DEN-1B) with a small standard deviation. If required, they can deliver a wider measurement range (up to 15.00 McFarland units), but with a greater standard deviation.

Grant

Specifications

Light source:	light diode
Wavelength:	565nm ±15nm
Measuring range DEN-1:	0.3 to 5.0McF
Measuring range DEN-1B:	0.0 to 6.00McF
Standard deviation at 3.00 McF units:	±0.1McF
Precision:	±3%
Measurement time:	1sec
Tubes diameter, external:	18mm
Tube diameter with D16 adapter (included):	16mm
Sample volume:	≥2ml
Dimensions (WxDxH):	165 x 115 x 75mm
Power supply:	12V (DEN-1B additionally 3 x AAA batteries)

9.721 057

Type	Description	PK	Cat. No.
DEN-1		1	**6.234 576**
DEN-1B		1	**9.721 057** 1
DEN MCF STDS	Set of 5 reference standards (0.5/1.0/2.0/3.0/4.0)	1	**6.237 141**
DEN MCF 18 STDS	Set of 5 reference standards (diam. 18mm)	1	**9.721 068**

3 Cell density meter DSM

NEW!

2

For measurement of E. Coli, yeast cells and other biological agents in suspension at 600nm wavelength

Laxco, Inc.

- Determination of McFarland units,% transmission (% T) and absorption (Abs)
- Portable, light-weight and battery-powered instruments
- Easy-to-use and easy-to-clean touch panel
- Small, space saving footprints
- Interval-mode for time-lapse recording

The single cuvette model DSM-Cuvette accepts 10mm path length semi-micro and macro cuvettes or 14 to 17 mm round tubes. The DSM-Micro model can work with volumes down to 20 micro litres saving reagents and allowing a high number of experiments e.g. when working with small volume samples. The multiple channel model DSM-Dual combines the features of DSM-Cuvette and DSM-Micro and therefore allows multiple samples to be tested at once increasing sample through-put and reducing labour overhead. All models are equipped with a drain channel under the sample site.

6.266 312

Further Features:

- One button operation, extremely easy workflow to allow quick testing
- USB 2.0 port for data collection, support automated data collection
- Direct results viewing on the instrument's screen
- LED light source for no maintenance and extended instrument life
- Fully built-in controls, no PC or software required
- Sofware for saving data as excel files available (please order separately)

3

Specifications

Wavelegth:	600nm
Bandwidth:	10nm
Reproducibility:	±0.02Abs at 1Abs
Absorbency Accuracy:	±0.05Abs at 1Abs
Absorbency Range:	-0.3 to 2.99 Abs
Stray light:	<1% T
Path length:	10mm
Memory:	2000 data points
Display:	LCD/3.5"
Dimensions (WxDxH):	173 x 194 x 84mm
Power requirements:	NiMH battery or power supply 100-240V

Type	PK	Cat. No.
DSM-Micro	1	**6.266 310**
DSM-Cuvette	1	**6.266 311**
DSM-Dual	1	**6.266 312** 2
Software for Density meters DSM	1	**6.266 313**